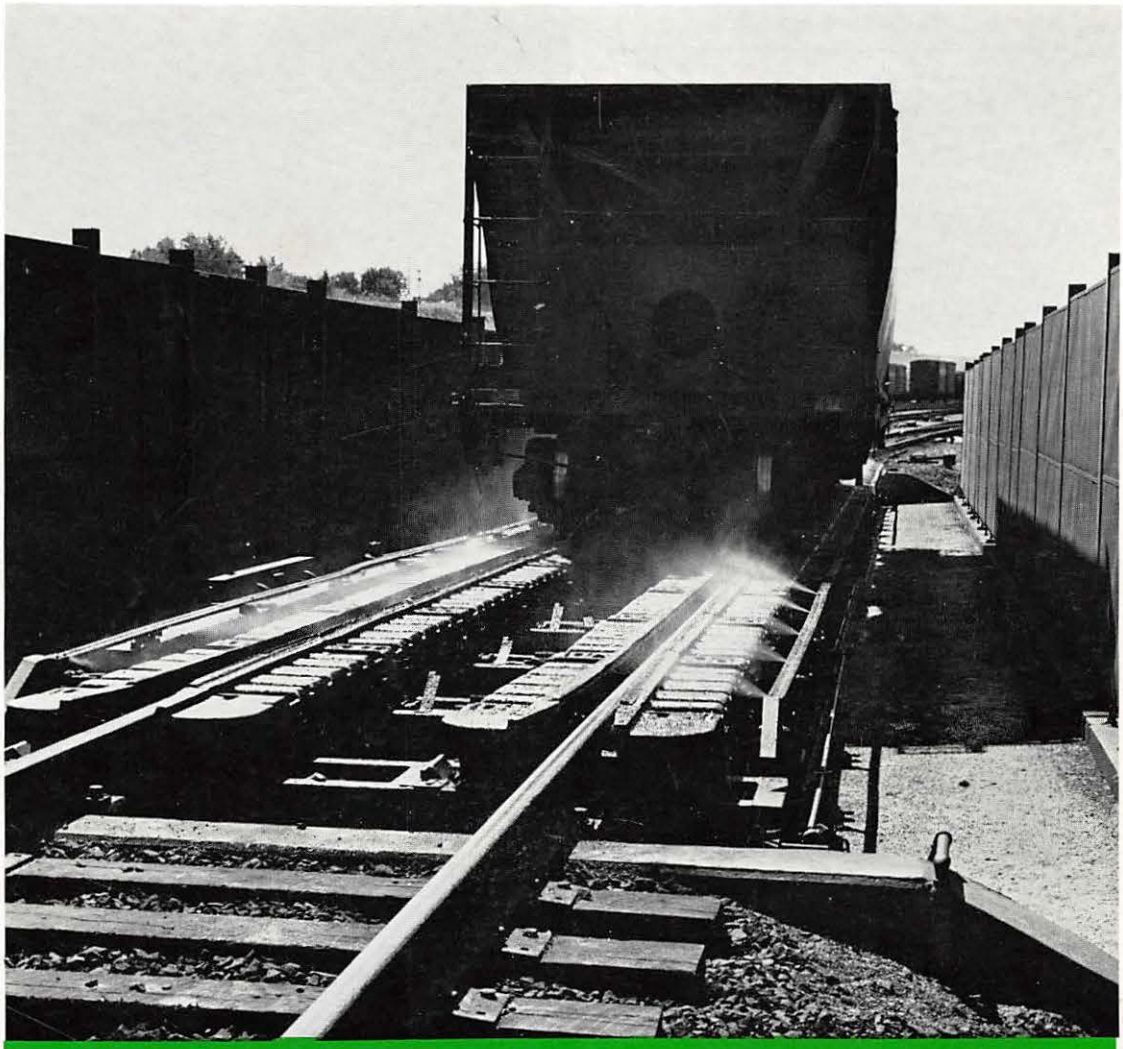
The SIGNALMAN'S Journal



Burlington Northern cuts retarder noise at Northtown yard

March 1977

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HEAVYWEIGHT LOADS

ALUMINUM TRACK CAR

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...for transporting loads up to 5000 lbs.

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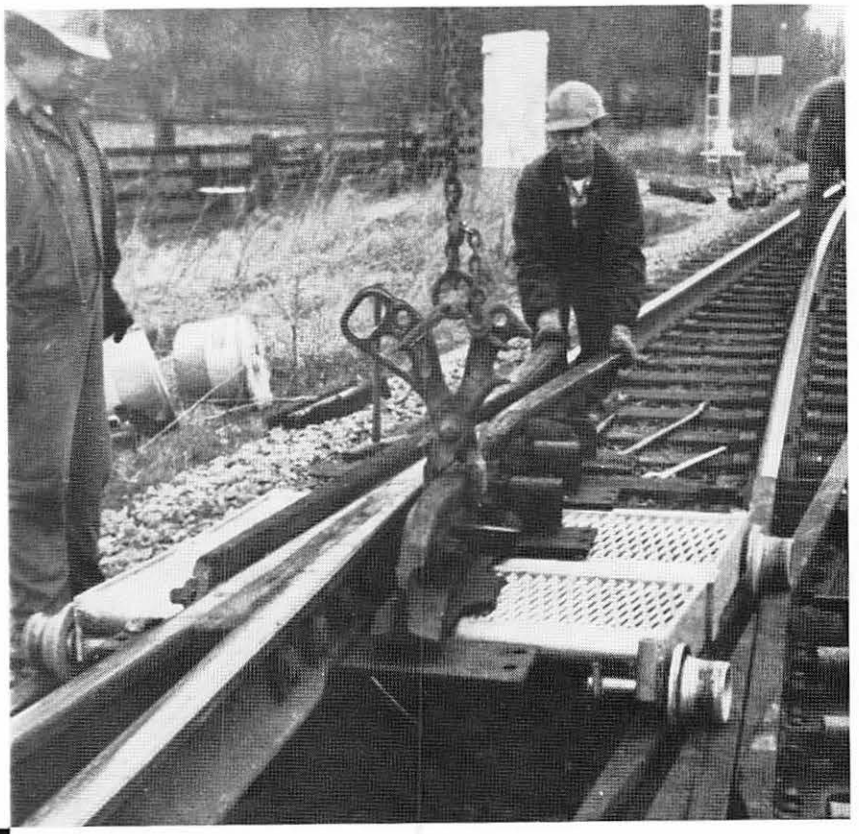

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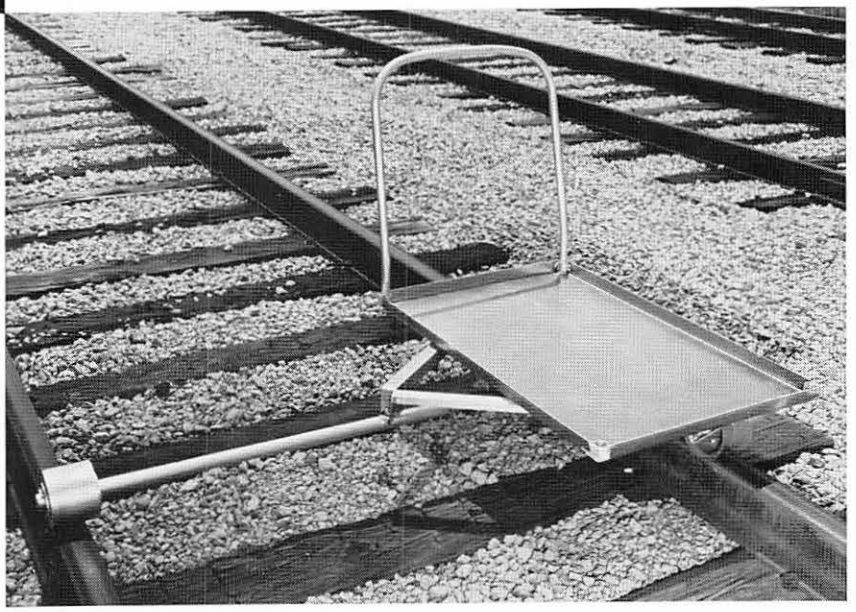

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Volume 58 Number 2 March 1977

ROBERT W. McKNIGHT
Editor & Manager
601 West Golf Road
Mount Prospect, Illinois 60056
312-439-3732

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COVER: Freight cars at Burlington Northern's Northtown yard at Minneapolis, MN pass through an oil and water mixture sprayed on the retarder shoes. The effect is to considerably reduce the noise. Barriers alongside the retarders absorb noise of the passing cars.

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Chamberlain's Message

Crossing safety takes a dive: write to your state highway officials

The latest figures from the Federal Railroad Administration indicate that motorists are not paying attention when approaching rail-highway grade crossings. For 8 months ending August 1976, there were 721 persons killed and 2,939 injured. These figures compare with 632 killed and 2,622 injured in the first 8 months of 1975. The record shows that 14% more people were killed in 1976 and 12% more were injured in rail-highway grade crossing accidents.

This is most disturbing as until last year the number killed and injured had been on the decline.

Recent studies clearly reveal that the installation of automatic warning devices does reduce accidents at rail-highway grade crossings. The California Public Utility Commission reported that the installation of automatic devices resulted in an 86% drop in deaths and an 80% reduction in serious injuries at rail-highway grade crossings.

The enactment of the Federal Aid Highway Acts of 1973 and 1976, provided the breakthrough for the use of public funds for installation of crossing protective devices. The 1973 Act provided $175 million for improvement of safety at rail-highway grade crossings on federally-aided highways. $250 million was provided for highways not on the federal aid program, which included state, county, city and local roads. The 1976 Highway Aid Act provided $287.5 million for federal aid roads and $168.75 million for non-federal aid roads. Funding will not be available after June 30, 1978, unless Congress extends the usage period.

Each year about 1,500 or more rail-highway grade crossings have been equipped with automatic warning devices. The installation rate should continue or be exceeded in 1977 and 1978. Estimates are that probably 2,000 crossings will be equipped, but detailed data is not available as yet.

Unfortunately, many railroads for some reason or other, have failed to seek available funds for protection of hazardous crossings. Much more can be done than has been done and while we are optimistic that progress is being made, in all candor the progress has been minimal.

What can the individual signalman do? He can play an important role in alerting both his railroad and the state railroad director about grade crossings that need to be equipped with automatic warning devices. The signal maintainer, for example, is best equipped to know local conditions.

The time is now to write your state railroad directors, asking them to obtain federal funds for installing automatic warning devices at rail-highway grade crossings. Estimates are that about $18 million in federal funds have been lost because the states failed to request funds. There is too much at stake to let more federal money be lost for grade crossing safety. The increasing death and injury rate of last year indicates that the need is now. With the revitalization of the railroads a necessity because of economic, energy, safety and welfare needs of our country, rail traffic and speeds are sure to increase.

The time for action is now, so it behooves all of us who are intimately involved in this area to do our part to expedite this lifesaving program.

Here is a list of Railroad Directors in 48 states that should be receptive to your letter for improved safety at rail-highway grade crossings. Even if you cannot point to a specific crossing that should be equipped with automatic warning devices, a letter asking for more state participation in this safety campaign will be helpful.

ALABAMA
Robert A. Jones, Supervisor
Trans. Rates and Service
Public Service Commission
Box 991
Montgomery 36102

(Please turn to page 6)

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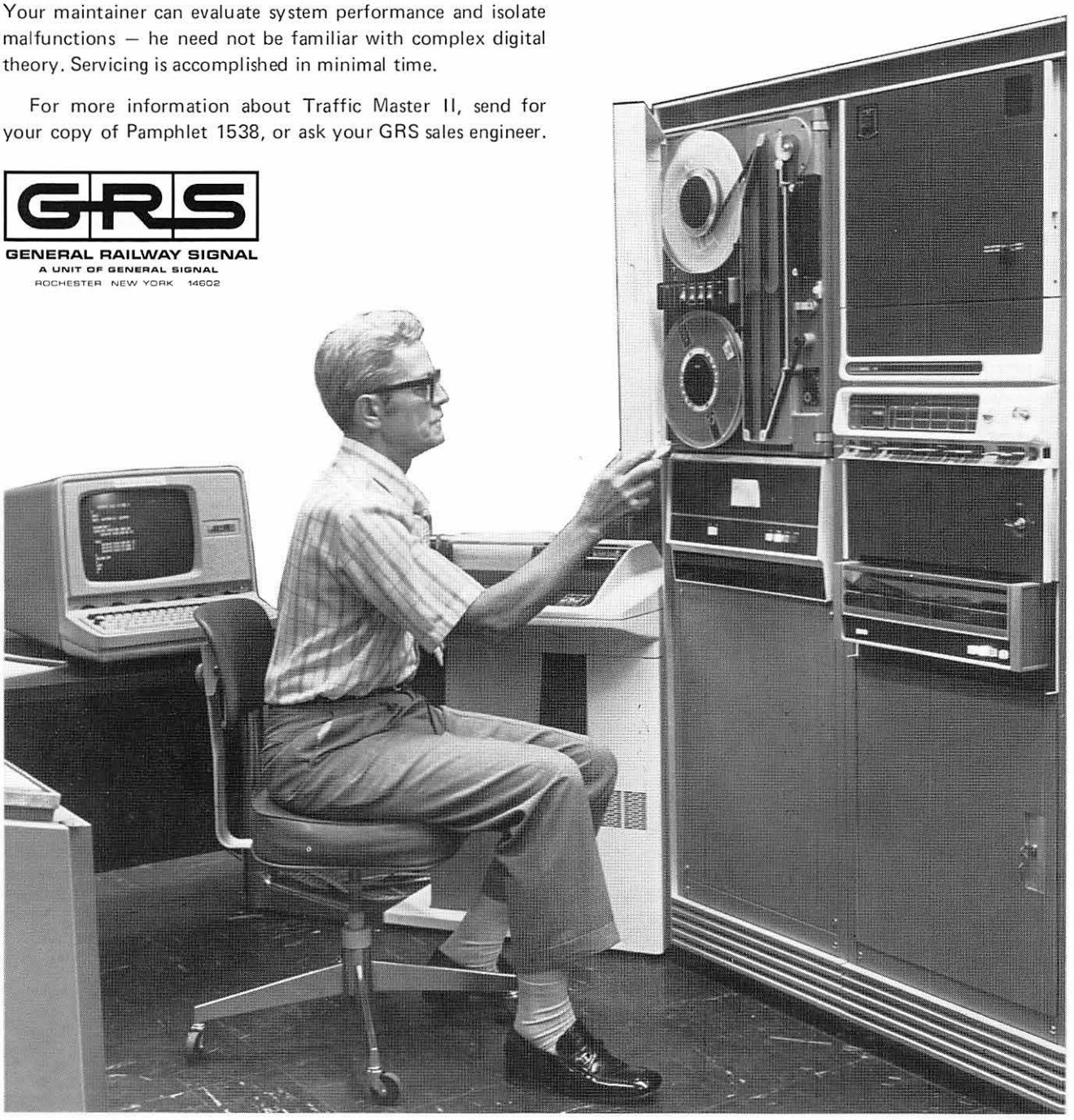

System modification and evaluation are accomplished at a convenient computer terminal.

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W. M. Buttram, Director
Transportation Commission
Justice Bldg.
Little Rock 72201

CALIFORNIA
William Oliver, Princ. Trans. Engr.
RR Operating & Grade Crossings Safety
Public Utilities Commission
455 Golden Gate Ave.
San Francisco 94102

COLORADO
John H. Baier, Trans. Engr.
Public Utilities Commission
1845 Sherman St.
Denver 80203

CONNECTICUT
Kenneth Faust, Assoc. Engr.
Public Utilities Comm.
165 Capitol Ave.
Hartford 06115

Richard J. Philips, Chf. Exec. Offr.
Bureau of Rail & Motor Carrier Ser.
Dept. of Transportation
24 Walcott Hill Rd.
Wethersfield 06109

DELAWARE
Bob Taylor, Trans. Plann. Engr.
Dept. of Transportation
Box 778
Dover 19901

FLORIDA
J. W. Atkinson, Supervisor
RR Safety & Service Dept.
Public Service Commission
700 S. Adams St.
Tallahassee 32304

Jay W. Brown, Director
Road Operations
Dept. of Transportation
Burns Bldg.
Tallahassee 32304

GEORGIA
Gordon E. Ganka, Asst. Dir.
Public Service Commission
244 Washington St., SW
Atlanta 30334

IDAHO
Joe Schreiber, Dir. of Trans.
Public Utilities Commission
State House
Boise 83720

ILLINOIS
Harry Stern, Chf. RR Engr.
Commerce Commission
527 E. Capitol Ave.
Springfield 62706

David Yaseen, Bur. Chf.
Research & Spec. Studies
Dept. of Transportation
2300 S. Dirksen Pkwy.
Springfield 62706

INDIANA
John Dring, Director
Railroad Dept.
Public Service Commission
901 State Office Bldg.
Indianapolis 46204

IOWA
Paul Heitmann, Director
Railroad Trans. Div.
Commerce Commission
Valley Bank Bldg.
Des Moines 50309

KANSAS
Ray R. McKinley, Director
Corporation Commission
State Office Bldg.
Topeka 66612

KENTUCKY
Robert Damron, Chairman
Railroad Commission
1024 State Office Bldg.
Frankfort 40601

LOUISIANA
John J. Jack, Chf. of Trans.
Public Service Commission
One American Pl.
Baton Rouge 70825

MAINE
Peter Bradford, Chairman
Transportation Div.
Public Utility Commission
State House Annex
Augusta 04333

Jack W. Brown, Chief
Right of Way Utility Section
Dept. of Transportation
State Office Bldg.
Augusta 04333

MARYLAND
Joseph Gardina, Dir. of Trans.
Public Service Commission
State Office Bldg.
901 W. Preston
Baltimore 20201

Charles Smith, Asst. Dir.
Div. of Systems Planning & Dev.
Dept. of Transportation
Box 8755
Baltimore 21240

MASSACHUSETTS
Joseph A. Coppenrath, Director
Railway and Bus Div.
Dept. of Public Utilities
State Office Bldg.
Boston 02202

MICHIGAN
C. E. Magoon, Supvr., RR Sect.
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Public Service Commission
Law Bldg.
Lansing 48913

MINNESOTA
Gordon W. Boldt, Engr.
Railway Negotiations
Public Service Commission
Highway Bldg.
St. Paul 55155

MISSISSIPPI
G. D. Elliott, Dir. of Trans.
Public Service Commission
Box 1174
Jackson 39205

MISSOURI
Gene Shackelford, Commissioner
Railroad Safety
Public Service Commission
Jefferson Bldg.
Jefferson City 65101

MONTANA
F. G. Fisher, Administrator
Transportation Div.
Dept. of Public Service Regulation
1227—11th Ave.
Helena 59601

NEBRASKA
James Paine, Dir. of Rates & Ser.
Public Service Commission
1342 "M" St.
Lincoln 68508

NEVADA
Ed Brice, Chf. Inspector
Transportation Div.
Public Service Commission
198 S. Carson St.
Carson City 89701

NEW HAMPSHIRE
L. Waldo Bigelow, Asst. Dir.
Railroad Div.
Public Utilities Commission
26 Pleasant St.
Concord 03301

NEW JERSEY
Alex Bjorkner, Chief
Bureau of Rail Operations
Dept. of Transportation
1035 Parkway Ave.
Trenton 08625

Bernard Minetti, Supervising Engr.
Railroad Section
Dept. of Public Utilities
1100 Raymond Blvd.
Newark 07102

NEW MEXICO
Wendell K. Waite, Director
Transportation Div.
Corporation Commission
Drawer 1269
Santa Fe 87503

NEW YORK
John Connor, Princ. RR Engr.
Railroad Section
Transportation Service Bureau
Public Service Commission
44 Holland Ave.
Albany 12208

Louis Rossi, Assoc. Trans. Reg. Analyst
Dept. of Transportation
Campus Bldg. 5
Albany 12226

NORTH CAROLINA
I. H. Hinton, Director
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Dept. of Commerce
Ruffin Bldg.
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Public Service Commission
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Bismarck 58505

OHIO
Charles R. Geer, Chief
Railroad Section
Public Utilities Commission
111 N. High St.
Columbus 43215

Byrd Finley, Jr., Engineer
Project Planning
Dept. of Transportation
25 S. Front St.
Columbus 43215

OKLAHOMA
William Mounger, RR Engr.
Corporation Commission
2101 N. Lincoln Blvd.
Oklahoma City 73105

OREGON
David Astle, Administrator
Railroad Div.
Public Utilities Commission
Labor & Industry Bldg.
Salem 97310

PENNSYLVANIA
Kenneth Walker, Util. Engr.
Railroad Div.
Dept. of Transportation
1120 Commonwealth & Foster Sts.
Harrisburg 17120

Pete Ritas, Chief
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Public Utilities Commission
North Office Bldg.
Harrisburg 17120

RHODE ISLAND
Gerald Pieri, Rail Coord.
Dept. of Transportation
State Office Bldg.
Providence 02903

SOUTH CAROLINA
Ben Alverson, Chf. of Rails & Tariffs
Public Service Commission
Owen Bldg.
Columbia 29201

SOUTH DAKOTA
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Public Utilities Commission
Dept. of Commerce & Consumer Affs.
State Capitol
Pierre 57501

John Therrian, Exec. Secy.
Railroad Task Force
Transportation Bldg.
Pierre 57501

TENNESSEE
Phil Griner, Util. Engr.
Right of Way Div.
Dept. of Transportation
234 Doctors Bldg.
Nashville 37219

W. B. Pemberton, Director
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Public Service Commission
Cordell Hull Bldg.
Nashville 37219

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Railroad Commission
Box 12967
Austin 78711

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Public Service Commission
330 E. Fourth St.
Salt Lake City 84111

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Robert Merchant, Trans. Dir.
Public Service Board
120 State St.
Montpelier 05602

VIRGINIA
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Commerce Council's Office
Corporation Commission
1220 Bank
Richmond 23219

Michael L. Rigsby, Counsel
Commerce Counsel's Office
Corporation Commission
1220 Bank
Richmond 23219

WASHINGTON
Lee Kegley, Railroads Supvr.
Utilities & Transportation Commission
Hwys.—Licenses Bldg.
Olympia 98504

WEST VIRGINIA
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Railroad Safety
Public Service Commission
East Main Capitol
Charleston 25305

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Transport Regulation
Public Service Commission
4802 Sheboygan Ave.
Madison 53702

John W. Fuller, Dir.
Bureau of Envir. & Policy Analysis
Div. of Planning
Dept. of Transportation
4802 Sheboygan Ave.
Madison 53702

WYOMING
Zan Lewis, Chairman
Public Service Commission
Supreme Court Bldg.
Cheyenne 82002

Attention: Local 31 to meet May 21, 1977

The regular second quarter meeting of Monumental City Lodge No. 31 will be held on Saturday May 21, 1977 at the Holiday Inn in Cumberland, MD. This is the correct date for the meeting, not that shown on the meeting date cards.

Oil and water mixture sprayed on retarder shoes reduces noise.

BN reduces noise at Northtown yard

Reducing noise in retarder yards has become an important design function. Signal maintainers can appreciate the advantage of noise reduction when cars pass through retarders. Several railroads have made notable efforts in noise reduction, a recent outstanding example is Burlington Northern.

After several tests at Pasco, Minot and Cicero yards, BN took designed noise reduction into Northtown, the Minneapolis yard that has 63 classification tracks and handles about 3,000 cars daily.

Tests at BN's other yards, mentioned above, plus studies made by Bolt, Beranek & Newman, sound consultant, indicated that when a freight car passed through a retarder, noise came from the vibrating car wheels and was caused by a slip-stick phenomenon resulting from the action of steel wheels being retarded by steel retarder brake shoes.

The problem was to break up the slip-stick phenomenon (similar to scratching chalk on a blackboard). The solution was to lubricate the retarder brake shoes with an emulsified oil and water spray. This oil and water treatment has eliminated much of the screech of car wheels as they pass through the retarders.

To further reduce noise, sound barriers were erected on both sides of the retarders. Sound level measurements have indicated a 16 db reduction in noise at 50 ft from the barrier. Measurements are made at rail height and at right angles to the retarder.

Releasable-type skate retarders, GRS model F4 are used at the bowl end of the classification yard which when released, reduces retarder screech when cars are pulled from a class track.

At Northtown, a 2% mixture of Texaco No. 1609, soluable, heavy duty oil and water is used. The mixture is a very stable emulsion and has good rust protection characteristics. This oil and water mixture has either eliminated all screeching or drastically reduced the screech of those worst cases of some cars that do screech when passing through retarders. So reports M. B. Walker, assistant director signal engineering, BN.

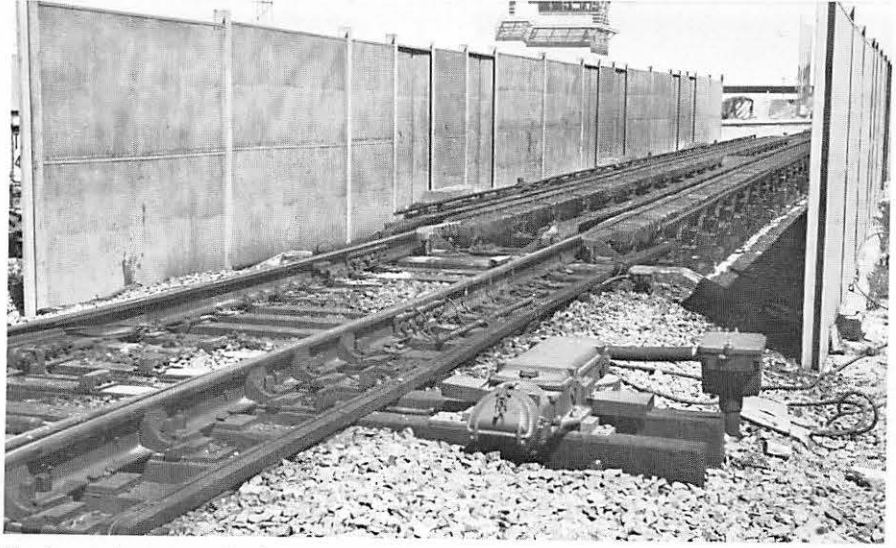
The emulsified oil and water mixture is delivered to the retarder shoes and car wheels in a spray fog at 30 lb per sq inch at the nozzles. A ¾-inch diameter manifold runs the entire length of the retarder, on the outside of each side, with the manifolds controlled in two sections. The entering section extends for two-thirds the length of the retarder and the leaving section extends through the bottom one-third of the retarder. The spray nozzles are set into the manifolds on 3 ft 8 inch centers thus creating a very fine spray for the entire length of the retarder. Each of these manifold sections is individually controlled either by the computer when in the humping mode, or manually by push button on the control console.

Cars are sprayed according to their weight so that every extra heavy and heavy car is sprayed with the medium and light cars having approximately every third or fourth car sprayed. The actual sequence of spraying is calculated by the computer on the

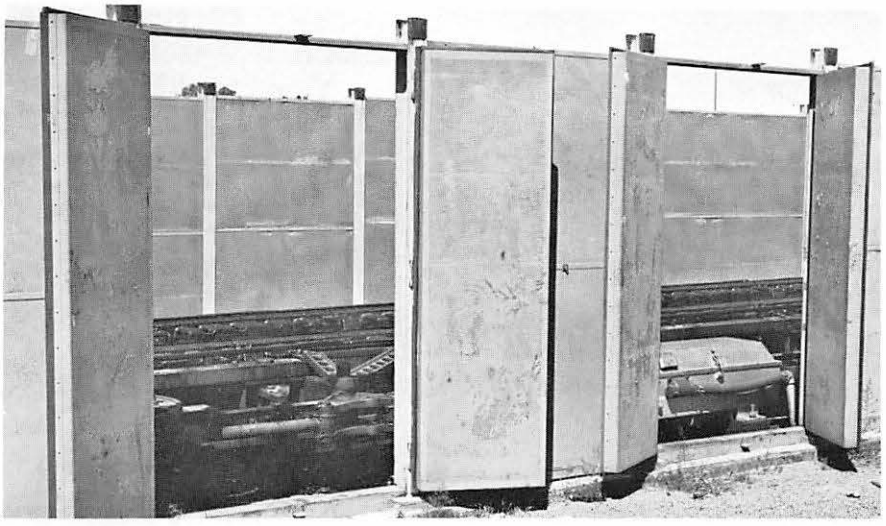
basis of the car weights and on the mixture of cars. The retarders are mounted on concrete foundations constructed so as to return the residual mixture to sumps located at the down-hill end of the retarders from whence it is pumped to a reclaiming plant housed in a nearby building. In the reclaiming plant the incoming mixture is settled in a receiving tank where the large particulate and scum is removed. After this, the mixture is pumped to a 2,000 gallon mixing tank where metered oil and water is added to reconstitute as required. The final 2% solution is then pumped into a 2,000 gallon supply tank from whence it is eventually delivered at a pressure of 90 lb per sq inch back to the retarders for pressure reduction to the spray manifolds.

What initially was envisioned as a simple wind barrier to prevent the spray from being dissipated evolved into sound absorbing barriers extending 6 ft above the rail and overhanging both ends of the retarders by approximately 11 ft to obtain a 16 dbA noise reduction. These barriers are made up of panels 4 ft high and 8 ft long held in vertical "I" beam members so that sections may be removed to gain access to the retarder for maintenance. Doors are provided in front of each retarder operating mechanism for the same reason; and because Northtown is subject to occasional high winds, a wind loading of 30 lb per sq ft was used in the design.

A further effort by GRS to control screech in the retarders lies in the process control program which is written so that no matter which weight of car is passing through the retarder a major portion of the retarder is used to bring the car down to the desired exit speed. This is in opposition to the general practice of obtaining exit speed as soon as possible and then using the balance of the retarder to maintain that speed once it has been attained.



Master and group retarders are equipped with General Railway Signal Silentard Noise Abatement System.



Sound absorbing barriers alongside retarders produce a 16 dbA noise reduction. Doors provide access to retarder mechanisms.

Lying to the east, between the yard and the residential areas, is a 65-ft bluff created by excavations for the yard. On top of this bluff was constructed a 10 to 15 ft mound so that the combination of the bluff and the mound would also act as a sound barrier shielding the concerned residents from yard noises.

The effectiveness of the noise abatement effort may readily be judged by actual observation. With the spray system operating with the correct mixture of oil and water car after car passes through the retarders without a screech. Occasionally an extra heavy car will start to screech just as the car reaches exit speed and will have the screech chopped off as the retarder opens. With the sound barriers doing their part, this brief and only occasional screech goes unnoticed. The yard is so quiet we depend upon eyes rather than ears to know whether cars are rolling.

The loss of the oil and water mixture due to evaporation and carry down into the yard is much less than expected and what is tracked down into the bowl acts, together with the rail surface lubricators, to reduce curve resistance.

BofRS serves health notice

On February 15, 1977, the Brotherhood of Railroad Signalmen served a Section 6 Notice on the nation's railroads to revise and supplement existing Agreements pertaining to hospital, surgical and medical benefits and group life insurance. Revisions sought are to be effective January 1, 1978. Text of the notice is published below:

REVISE CONTRACT POLICY GA-23000 AS FOLLOWS:

(1) Subtitute for the surgical, anesthesia, radiation and X-ray and laboratory schedules, provisions for covering the usual and customary charges for all such services.

(2) Cover the usual and customary charges for prescription drugs as well as for physician's visits either in hospital, in office, or in home, including dependents.

(3) Increase present miscellaneous hospital expense allowances and include all intensive care expense under basic hospital coverage.

(4) Reduce the amount of the deductible under major medical expense benefits and increase the percentage of expense covered after the deductible is met and place a limit on the annual cost an employe and/or dependent would be required to assume thereunder. Eliminate special restriction of psychiatric care.

(5) Improve provisions relating to outpatient expense benefits and increase the amount for ambulance charges to the usual and customary charges for such service..

(6) Provide for any expense incurred by living donor of an organ or a tissue to the extent such donor is not covered under any existing health insurance program.

(7) Provide for any expense incurred insofar as elective surgery is concerned such as, but not limited to, voluntary sterilization.

(8) Increase the amount of life insurance for active employes and increase the amount for accidental death and dismemberment.

(9) Continue premium payment and full coverage under Group Policy GA-23000 for employes and their dependents who retire prior to attainment of age 65, either for disability or otherwise, until attainment of age 65 or until covered under Medicare provisions or a National Health Program.

(10) Allow payment of benefits for covered services provided at approved surgical centers and/or facilities.

(11) Provide for alcoholic rehabilitation at approved rehabilitation centers.

(12) Provide for periodic health examinations for employes and dependents including one pap smear per year.

AN UNDERSTANDING shall be reached that any reduction in premium derived by the inauguration of a National Health Program shall be applied as wages or additional benefits.

REVISE DENTAL PLAN—CONTRACT POLICY GP-12000

(1) Amend the policy to provide for payment of 80% of reasonable and customary charges, with a maximum of $1,000.00 per calendar year per covered individual.

(2) Extend coverage to disabled, dismissed, suspended and furloughed employes the same as provided in GA-23000.

Hours of Service:

BofRS and carriers sign memorandum

Below is a list of the carriers that signed the memorandum of understanding concerning the Hours of Service application to members represented by the Brotherhood of Railroad Signalmen. The memorandum was published on pages 12 and 13 of the December issue of The Signalman's Journal.

EXHIBIT A

RAILROADS PARTIES TO MEMORANDUM OF UNDERSTANDING BETWEEN THE NATIONAL RAILWAY LABOR CONFERENCE AND REPRESENTATIVES OF THE BROTHERHOOD OF RAILROAD SIGNALMEN DATED NOVEMBER 19, 1976, EFFECTIVE DECEMBER 1, 1976, IN CONNECTION WITH MODIFICATION OF CERTAIN COLLECTIVELY BARGAINED RULES DUE TO RESTRICTIONS IMPOSED BY THE HOURS OF SERVICE ACT, AS AMENDED BY PUBLIC LAW 94-348.

This authorization is co-extensive with provi-

sions of current schedule agreements applicable to employees represented by the Brotherhood of Railroad Signalmen.

Akron, Canton & Youngstown Railroad Company
Alton & Southern Railway Company
Atchison, Topeka and Santa Fe Railway Company
Atlanta and West Point Rail Road Company—
The Western Railway of Alabama
Baltimore and Ohio Railroad Company
Baltimore and Ohio Chicago Terminal Railroad Company
Bangor and Aroostook Railroad Company
Belt Railway Company of Chicago
Bessemer and Lake Erie Railroad Company
*Boston and Maine Corporation
Burlington Northern Inc.
Canadian Pacific Limited
Central of Georgia Railroad Company
Central Vermont Railway, Inc.
Chesapeake and Ohio Railway Company
Chicago & Illinois Midland Railway Company
Chicago and North Western Transportation Company
Chicago and Western Indiana Railroad Company
Chicago, Milwaukee, St. Paul and Pacific Railroad Company
*Chicago, Rock Island and Pacific Railroad Company
Clinchfield Railroad Company
Consolidated Rail Corporation—
Ann Arbor Railroad
Boston Terminal Corporation
Former Central Railroad Company of New Jersey, New York and Long Branch Railroad
Former Dayton Union Railway
Former Erie Lackawanna Railway
Former Indianapolis Union Railway
Former Lehigh and Hudson River Railway
Former Lehigh Valley Railroad
Former Penn Central Transportation Company
Former Pennsylvania-Reading Seashore Lines
Former Reading Company
Delaware & Hudson Railway Company
Denver and Rio Grande Western Railroad Company
Denver Union Terminal Railway Company
Detroit & Toledo Shore Line Railroad Company
Detroit Terminal Railroad Company
Detroit, Toledo and Ironton Railroad Company
Duluth, Winnipeg & Pacific Railway Company
Elgin, Joliet and Eastern Railway Company
Fort Worth and Denver Railway Company
Galveston, Houston and Henderson Railroad Company
Georgia Railroad
Grand Trunk Western Railroad Company
Green Bay and Western Railroad Company
Houston Belt & Terminal Railway Company
Illinois Central Gulf Railroad
Indiana Harbor Belt Railroad Company
Joint Texas Division of CRI&P—FW&D Ry.
Kansas City Southern Railway Company
Louisiana & Arkansas Railway Company
Kansas City Terminal Railway Company
Kentucky & Indiana Terminal Railroad Company
Louisville and Nashville Railroad Company
Maine Central Railroad Company
Portland Terminal Company
Missouri-Kansas-Texas Railroad Company
Missouri Pacific Railroad Company (Including former The Texas and Pacific Railway Company and former Chicago and Eastern Illinois Railroad)
Monongahela Railway Company
New Orleans Public Belt Railroad
New Orleans Union Passenger Terminal
*New York, Susquehanna and Western Railroad
Norfolk and Western Railway Company
Peoria and Pekin Union Railway Company
Pittsburgh & Lake Erie Railroad Company, Lake Erie & Eastern Railroad Company
Richmond, Fredericksburg & Potomac Railroad Company
St. Louis-San Francisco Railway Company
St. Louis Southwestern Railway Company
Seaboard Coast Line Railroad Company
Soo Line Railroad Company
Southern Pacific Transportation Company—
Pacific Lines, including former Pacific Electric Railway Company
Texas and Louisiana Lines
Southern Railway Company
Alabama Great Southern Railroad Company
Cincinnati, New Orleans and Texas Pacific Railway Company
Georgia Southern and Florida Railway Company
New Orleans Terminal Company
St. Johns River Terminal Company
Staten Island Railroad Corporation
Terminal Railroad Association of St. Louis
Texas Pacific-Missouri Pacific Terminal Railroad of New Orleans
Toledo, Peoria and Western Railroad Company
Union Pacific Railroad Company
Union Railroad Company (Pittsburgh)
Washington Terminal Company
Western Maryland Railway Company
Western Pacific Railroad Company

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*—Subject to the approval of the Courts.

For the carriers:
/s/ W. H. DEMPSEY
For the Brotherhood of Railroad Signalmen:
/s/ C. J. CHAMBERLAIN
Washington, D.C., January 12, 1977

FRA issues radio rules

New rules concerning use of two-way radio by the railroads have been issued by the Federal Railroad Administration. Known as Radio Standards & Procedures, they are to become effective August 1, 1977. They will become a part of Chapter II of Title 49 of the Code of Federal Regulations, Part 220. These new rules were issued January 19, 1977. The rules are printed below. A discussion of the rules and why they were produced will be published in a future issue of The Signalman's Journal.

Subpart A—General

Sec.
220.1 Scope.
220.3 Application.
220.5 Definitions.
220.7 Penalty.

Subpart B—Radio Procedures

220.21 Railroad operating rules; radio communications.
220.23 Publication of radio information.
220.25 Instruction of employees.
220.27 Identification.
220.29 Statement of letters and numbers.
220.31 Initiating a transmission.
220.33 Receiving a transmission.
220.35 Ending a transmission.
220.37 Voice test.
220.39 Continuous monitoring.
220.41 Notification on failure of train radio.
220.43 Communication consistent with rules.
220.45 Communication must be complete.
220.47 Emergencies.
220.49 Yard movements, switching, backing.
220.51 Signal indications.

Subpart C—Train Orders

220.61 Transmission of train orders by radio.

AUTHORITY: Sec. 202 and 209, 84 Stat. 971, 975 (45 U.S.C. 431, 438), and § 1.49(n) of the regulations of the Office of the Secretary of Transportation, 49 CFR 1.49(n).

Subpart A—General

Sec. 220.1 Scope.

This part prescribes minimum requirements governing the use of radio communications in connection with railroad operations. The term "radio communications" refers to the transmission and reception of voice communications by radio. So long as these minimum requirements are met, railroads may adopt additional or more stringent requirements.

Sec. 220.3 Application.

(a) Except as provided in paragraph (b) of this section, this part applies to railroads that operate trains or other rolling equipment on standard gage track which is part of the general railroad system of transportation.

(b) This part does not apply to:

(1) A railroad that operates only on track inside an installation which is not part of the general railroad system of transportation; or

(2) A rapid transit railroad that operates only on track used exclusively for rapid transit, commuter, or other short-haul passenger service in a metropolitan or suburban area.

Sec. 220.5 Definitions.

As used in this part, the term:

(a) "Employee" means any person who is authorized by a railroad to use its radio facilities in connection with railroad operations.

(b) "Railroad operation" means any movement of a train, engine, on-track equipment, or track motor car, single or in combination with other equipment, on the track of a railroad.

(c) "Train Order" means any mandatory directive issued as authority for the conduct of a railroad operation which is transmitted by radio.

Sec. 220.7 Penalty.

Each railroad to which this part applies that violates any requirement prescribed in this part is liable to a civil penalty of at least $250 but no more than $2500.

Subpart B—Radio Procedures

Sec. 220.21 Railroad operating rules; radio communications.

(a) After August 1, 1977, the operating rules of each railroad with respect to radio communications shall conform with the requirements of this part.

(b) Before November 1, 1977 or 30 days before it commences to use radio communications in connection with railroad operations, whichever is later, each railroad shall file with the Federal Railroad Administrator, Washington, D.C. 20590, one copy of its operating rules with respect to radio communications. Each amendment to these rules shall be filed with the Federal Railroad Administrator within 30 days after it is issued.

Sec. 220.23 Publication of radio information.

Each railroad shall designate its territory where radio base stations are installed, where wayside stations may be contacted, and designate appropriate radio channels by publishing them in a timetable or special instruction. The publication shall indicate the periods during which base and way-

side radio stations are attended or in operation.

Sec. 220.25 Instruction of employees.

Each employee who is authorized to use a radio in connection with a railroad operation, shall be:

(a) Provided with a copy of the railroad's operating rules governing the use of radio communication in a railroad operation.

(b) Instructed in the proper use of radio communication as part of the program of instruction prescribed in § 217.11 of this chapter.

Sec. 220.27 Identification.

(a) Except as provided in paragraph (c) of this section, the identification of each wayside, base or yard station shall include at least the following minimum elements, stated in the order listed:

(1) Name of railroad. An abbreviated name or initial letters of the railroad may be used where the name or initials are in general usage and are understood in the railroad industry;

(2) Name of office or other unique designation of the station; and

(3) Location of the station.

(b) Except as provided in paragraph (c) of this section, the identification of each mobile station shall consist of the following elements, stated in the order listed:

(1) Name of the railroad. An abbreviated name or initial letters of the railroad may be used where the name or initial letters are in general usage and are understood in the railroad industry;

(2) Train name (number), if one has been assigned, or other appropriate unit designation; and

(3) The word "engine", "caboose", "motorcar", "pakset" or other word which indicates to the listener the precise mobile transmitting station, unless identical to the requirement of paragraph (b) (2) of this section.

(c) If positive identification is achieved in connection with switching, classification, and similar operations wholly within a yard, fixed and mobile units may use short identification after the initial transmission and acknowledgement consistent with applicable Federal Communication Commission regulations governing "Station Identification".

Sec. 220.29 Statement of letters and numbers.

(a) If necessary for clarity, a phonetic alphabet shall be used to pronounce any letter used as an initial, except initial letters of railroads. See Appendix "A", of this part for the recommended phonetic alphabet.

(b) A word which needs to be spelled for precision or clarity shall first be pronounced, and the word shall then be spelled. If necessary, the word shall be spelled again, using a phonetic alphabet.

(c) Numbers shall be spoken by digit, except that exact multiples of hundreds and thousands may be started as such. A decimal point shall be indicated by the word "decimal". (See Appendix B to this part, for a recommended guide to the pronunciation of numbers.)

Sec. 220.31 Initiating a transmission.

Before transmitting by radio, an employee shall:

(a) Listen to insure that the channel on which he intends to transmit is not already in use;

(b) Identify his station in accordance with the requirements of § 220.27; and

(c) Verify that he has made radio contact with the person or station with whom he intends to communicate by listening for an acknowledgement. If the station acknowledging his transmission fails to identify itself properly, the employee shall require a proper identification before proceeding with the transmission.

Sec. 220.33 Receiving a transmission.

(a) Upon receiving a radio call from another station, an employee shall promptly acknowledge the call, identifying his station in accordance with the requirements of § 220.27 and stand by to receive. An employee need not attend the radio, however, if this would interfere with other immediate duties relating to the safety of railroad operations.

(b) An employee shall acknowledge receipt of all transmissions directed to him or his station.

(c) An employee who receives a transmission shall repeat it to the transmitting party unless the communication:

(1) Relates to yard switching operations;

(2) Is a recorded message from an automatic alarm device; or

(3) Is general in nature and does not contain any information, instruction or advice which could affect the safety of a railroad operation.

Sec. 220.35 Ending a transmission.

(a) At the close of each transmission to which a response is expected, the transmitting employee shall say "over" to indicate to the receiving employee that the transmission is ended.

(b) At the close of each transmission to which no response is expected, the transmitting employee shall state his identification followed by the word "out" to indicate to the receiving employee that the exchange of transmissions is complete.

Sec. 220.37 Voice test.

(a) Each radio which is used in connection with a railroad operation outside yard limits shall be tested at the point where the train is originally made up. At least once during each tour of duty, the engineer and conductor shall be responsible for the testing of the radio to verify that the radio is operating properly on the engine and caboose. The tests shall consist of an exchange of voice transmissions with another station. The other station shall advise the station conducting the test of the quality and readability of its transmission.

(b) Any radio found not to be functioning prop-

erly shall be removed from service until it has been repaired.

(c) When a radio is removed from service, each crew member of the train and the train dispatcher or other employee designated by the railroad shall be so notified.

Sec. 220.39 Continuous monitoring.

Engine and caboose radios must be turned on to the appropriate channel as designated in § 220.23 with the volume adjusted to receive communications while the engine or caboose is manned.

Sec. 220.41 Notification on failure of train radio.

The failure of an engine or caboose radio enroute shall be reported as soon as practicable to the train dispatcher or other employee designated by the railroad by any alternate means of communication available.

Sec. 220.43 Communication consistent with rules.

Radio communication may not be used in connection with a railroad operation in a manner which conflicts with the requirements of this Part 220, Federal Communication Commission regulations or the railroad's operating rules. The use of citizen band radios for railroad operating purposes is prohibited.

Sec. 220.45 Communication must be complete.

Any radio communication which is not fully understood or completed in accordance with the requirements of Part 220 and the operating rules of the railroad, shall not be acted upon and shall be treated as though not sent.

Sec. 220.47 Emergencies.

(a) An emergency transmission shall be preceded by the word "emergency", repeated three times. An emergency transmission shall have priority over all other transmissions and the frequency or channel shall be kept clear of non-emergency traffic for the duration of the emergency transmission.

(b) Emergency transmissions shall be used to report derailments, collisions, storms, wash-outs, fires, obstructions to tracks, and other hazardous conditions which could result in death or injury, damage to property or serious disruption of railroad operations. Emergency transmissions shall describe as completely as possible the nature, degree and location of the hazard.

Sec. 220.49 Switching, backing or pushing.

When radio communication is used in lieu of hand signals in connection with the switching, backing or pushing of a train, engine, or car, the employee directing the movement shall give complete instructions or keep in continuous radio contact with the employees receiving the instructions. When backing or pushing a train, engine or cars, the distance of the movement must be specified, and the movement must stop in one-half the remaining distance unless additional instructions are received. If the instructions are not understood or continuous radio contact is not maintained, the movement shall be stopped immediately and may not be resumed until the misunderstanding has been resolved, radio contact has been restored, or communication has been achieved by hand signals or other procedures in accordance with the operating rules of the railroad.

Sec. 220.51 Signal indications.

(a) No information may be given by radio to a train or engine crew about the position or aspect displayed by a fixed signal. However, radio may be used by a train crew member to communicate information about the position or aspect displayed by a fixed signal to other members of the same crew.

(b) Except as provided in the railroad's operating rules, radio communication may not be used to convey instructions which would have the effect of overriding the indication of a fixed signal in automatic block territory.

Subpart C—Train Orders

Sec. 220.61 Transmission of train orders by radio.

(a) Train orders may be transmitted by radio only when authorized by railroad's operating rules and must be transmitted in accordance with the railroad's operating rules and the requirements of this Part 220.

(b) The procedures for transmission of train orders by radio are as follows:

(1) The dispatcher or operator shall call the addressees of the train order and state his intention to transmit the train order.

(2) Before the train order is transmitted, the employee to receive and copy the train order shall state his name, identification or call sign, location, and that he is prepared to receive a train order. Train orders may not be received and copied by an employee operating the controls on an engine of a moving train. Train orders may not be transmitted to the crew of a moving train when, in the judgment of either the conductor, the engineer, or the train dispatcher, the train orders cannot be received and copied without impairing the safe operation of their train.

(3) Train orders shall be copied in writing by the receiving employee in the format prescribed in the railroad's operating rules.

(4) After the train order has been received and copied, it shall be immediately repeated in its entirety. After verifying the accuracy of the repeated train order, the dispatcher shall then state "complete", the time and the initials of the employee designated by the railroad. Employees copying train orders must then acknowledge by repeating "complete" and the time.

(5) Before a train order is acted upon, both the

The main economic impact of the new radio rules will be the cost of training employees in the proper use of radio communications.

conductor and engineer must have a written copy of the train order and make certain that the train order is read and understood by other members of the crew.

(6) A train order which has not been completed or which does not comply with the requirements of the railroad's operating rules, may not be acted upon and must be treated as though not sent. Information contained in a train order may not be acted upon by persons other than those to whom the train order is addressed.

Appendix B—Recommended Pronunciation of Numerals

To distinguish numbers from similar sounding words, the word "figures" should be used preceding such numbers. Numbers should be pronounced as follows:

Number:	*Spoken*
0	ZERO
1	WUN
2	TOO
3	THUH-REE
4	FO-WER
5	FI-YIV
6	SIX
7	SEVEN
8	ATE
9	NINER

(The figure ZERO should be written as "0" to distinguish it from the letter "O". The figure ONE should be underlined to distinguish it from the letter "I". When railroad rules require that numbers be spelled, these principles do not apply.)

The following examples illustrate the recommended pronunciation of numerals:

Number:	*Spoken*
44	FO-WER FO-WER
500	FI-YIV HUNDRED
1000	WUN THOUSAND
16000	WUN SIX THOUSAND
14899	WUN FO-WER ATE NINER NINER
20.3	TOO ZERO DECIMAL THUR-REE

(FR Doc.77-2584 Filed 1-26-77; 8:45 am)

Appendix A—Recommended Phonetic Alphabet

A ALFA	N NOVEMBER
B BRAVO	O OSCAR
C CHARLIE	P PAPA
D DELTA	Q QUEBEC
E ECHO	R ROMEO
F FOXTROT	S SIERRA
G GOLF	T TANGO
H HOTEL	U UNIFORM
I INDIA	V VICTOR
J JULIET	W WHISKEY
K KILO	X XRAY
L LIMA	Y YANKEE
M MIKE	Z ZULU

The letter "ZULU" should be written as "Z" to distinguish it from the numeral "2."

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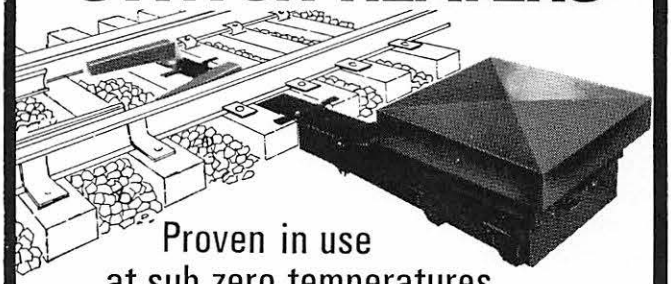

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Brock Adams remarks about railroads

By Michael Marsh

Railroading's future will be affected by the ideas and attitudes of the new Secretary of Transportation, Brock Adams. As a leading progressive in the U.S. House of Representatives, Adams helped develop and guide to passage crucially important railroad-aid bills. Thus he has a fine past record of support for railroad needs. But his new post is a much broader one. How does he view the picture now?

Some insight on that emerges from Adams' answers to questions put to him by members of the Senate Commerce Committee, at his confirmation hearing before that committee last January. (The committee and the Senate swiftly approved his nomination.)

The senators quizzed Adams about all modes of transportation and many different problems. Here are his replies:

Facing yearly outlays of nearly $15 billion by the Department of Transportation (DOT), Adams said "the subject of transportation financing . . . will consume a great deal of my personal attention as Secretary." Without committing himself to any single approach, Adams suggested thinking "in terms of a combined transportation account, so that we can decide how to shift the federal investment in transportation as our national needs change with time, rather than simply adding up the requests of each interest, even if they conflict."

"For the past few years," Adams noted, "Congress has of necessity had to focus its attention on the railroads. It is time now for us to take a careful look at the future of the other modes, such as airlines, trucks and water carriers," in terms of their needs.

"I see no need for an adversary relationship between the USRA and the DOT," Adams also declared. As for Amtrak, Adams said he would "certainly work to establish a more constructive relationship in this area. I share the belief . . . that rail passenger service has an important role in the national transportation picture." As an Amtrak board member, Adams added, "I will exercise my duties in such a way as to encourage a proper level of service to the public."

However, he noted that he's also responsible for "oversight" of the federal funds going to Amtrak. He said he would seek "maximum return on the financial resources made available to me for Amtrak and with a concern for national transportation policy."

As for Amtrak routes, Adams said: "In the final analysis, ridership and the potential for ridership is the single most important factor in the route and service criteria, and I will make every effort to concentrate Amtrak resources where maximum ridership can be achieved."

The Northeast Corridor project for upgrading rights of way to provide high speed passenger service has been bogged down by arguments between DOT and Amtrak over who should control the work. Commenting on this, Adams said: "I am concerned over the time that has been lost in moving forward on construction of the Northeast Corridor project and will review the status of the project immediately upon taking office with a view toward establishing a positive attitude by DOT toward carrying out the provisions of the statute." He added that he thinks the project "should be managed within the DOT."

Asked whether "DOT should continue to control contracting on the corridor so as to assure employment opportunities for minorities," Adams cited a provision in the statute that calls for achieving the Northeast Corridor project in ways "which will produce the maximum labor benefit in terms of hiring persons who are presently unemployed." Adams said he will "pay close attention to this statutory provision and continue assuring employment opportunities for minorities."

Also, he said he will look into rail electrification projects, especially on Conrail's mainline between Harrisburg and Pittsburgh, Pa. "Many studies," Adams said, "have indicated that electrification of high density rail lines can produce substantial savings in maintenance and fuel costs," but initial capital cost "is very high."

Adams stressed the need to consider the broad impact of federal transportation programs and their impact on "competing modes." He noted, for example, that the Interstate Highway System had "a drastic effect on Penn Central." The current controversy over expanding Locks and Dam 26 on the Mississippi, he said, "demonstrates the fact that waterways cannot be considered in isolation, but must be thought of in their relationship to other modes of transportation and the allocation of general funds."

Adams also voiced doubt about the wisdom of building coal slurry pipelines. "There is a serious question," he said, "as to whether the construction of coal slurry pipelines is necessary and the effect on the rail carriers is substantial."

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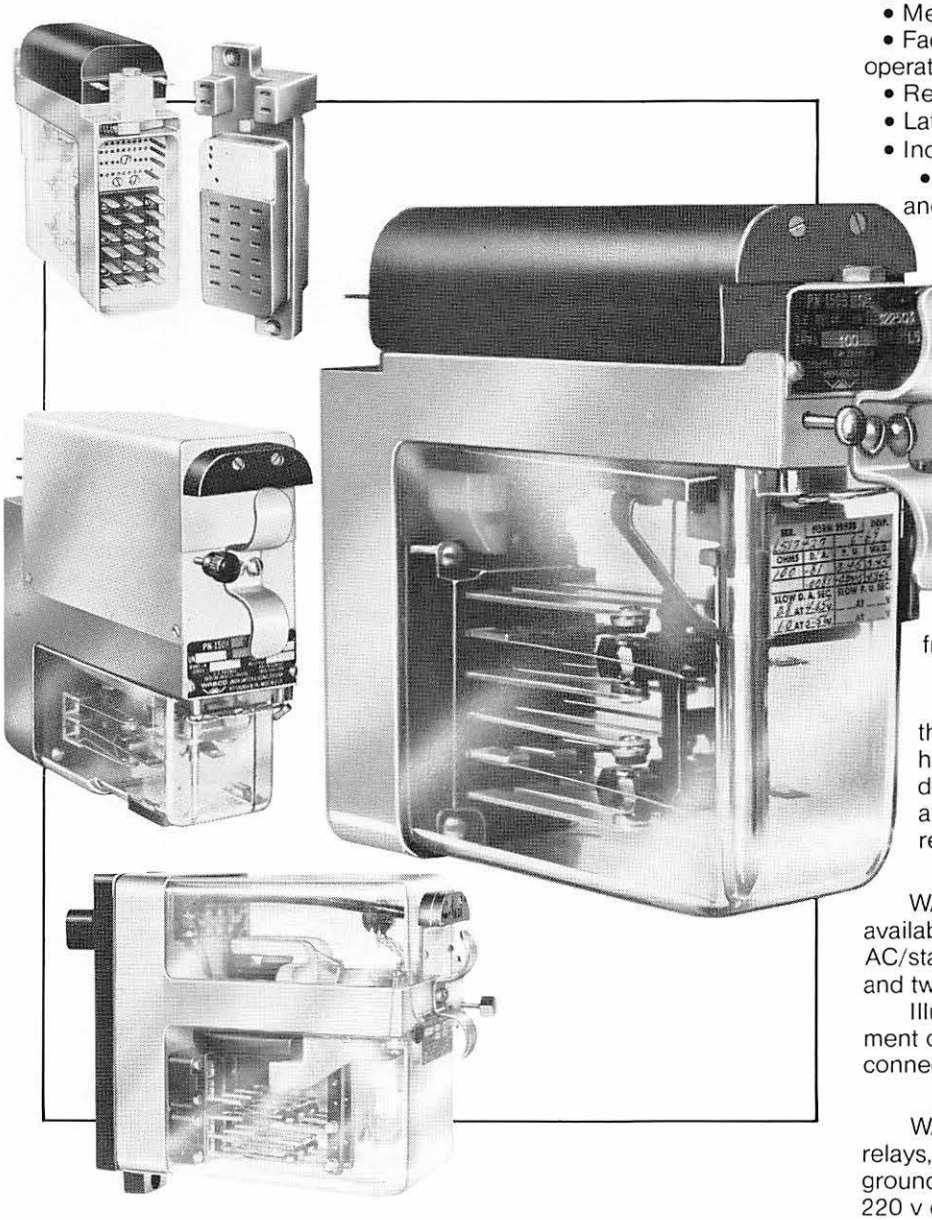

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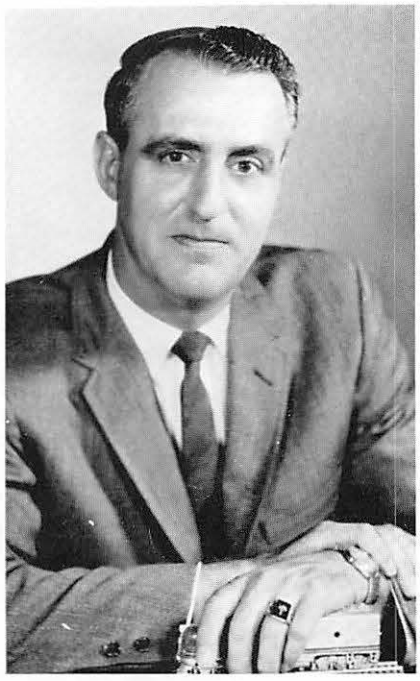
Personal Aids and News

Railroad Retirement Board news from R. T. Bates, secretary-treasurer, BofRS



The Railroad Retirement Act provides annuities for the wives or dependent husbands of retired railroad employees. These spouse annuities are payable in addition to the regular and supplemental annuities payable to retired employees.

The following questions and answers illustrate the eligibility requirements for railroad retirement spouse annuities.

(1) How is a spouse annuity calculated?

A spouse annuity consists of two tiers. The first tier is one-half of the employee's tier I amount; the second tier is one-half of the employee's tier II amount. The total of her tier I and tier II is subject to a maximum of $311.85 effective January 1977. If a wife is entitled to social security benefits, her annuity may have to be reduced.

The average spouse annuity awarded at the end of 1976 was about $220 per month.

(2) My husband retired with over 30 years of railroad service. How old must I be to receive a spouse annuity?

A full spouse annuity is payable at age 60 to the wife of an employee age 60 with 30 years of service, if the employee's regular annuity began after June 1974. If the wife of such a 60/30 retiree has a minor or disabled child of the employee's in her care, she is eligible at any age.

However, if the employee retired before July 1974 with 30 years of service he must be age 65 before his wife can receive an annuity. She may receive a full annuity at age 65 or at any age if she has a minor or disabled child in her care. At age 62, she may receive a reduced annuity.

(3) How old must a wife be to get a spouse annuity if her husband had less than 30 years of railroad service upon his retirement?

If he retired after 1974 and he is at least age 62, she can get a reduced spouse annuity at age 62 or a full annuity at age 65 or at any age if she has a minor or disabled child in her care. If he retired before 1975 with less than 30 years' service, he must be 65 before his wife can be entitled to an annuity. Under those circumstances she can get a reduced annuity at age 62 or a full annuity at age 65 or at any age if she has a minor or disabled child in her care.

4. My husband and I are both career railroad workers. Can I qualify for a railroad retirement spouse annuity based on my husband's railroad work as well as an annuity based on my own railroad work?

A female railroad worker may qualify for a railroad retirement spouse annuity as well as an employee annuity if either she or her husband had some railroad service prior to 1975. The total amount she receives as an employee and spouse is equal to the sum of the two separate annuities.

However, if both husband and wife started railroad employment after 1974, she may receive, in effect, only her own railroad retirement employee annuity or a spouse annuity, whichever is larger.

(5) When my husband and I retire later this year I will receive a social security benefit. Will I also be able to receive a railroad retirement spouse annuity based on my husband's earnings?

If you are otherwise eligible, you may receive both a railroad retirement spouse annuity and a social security benefit but the tier I part of your railroad retirement annuity will be reduced by the amount of your social security benefit. However, if certain vesting requirements are met, you will receive an additional annuity amount which may substantially restore the reduction made for social security benefits.

(6) How much is a wife's annuity reduced if she chooses to begin receiving it at age 62 instead of age 65?

For a wife not eligible for a full annuity at age 60, or earlier on the basis of having a child in her care, the reduction is 1/180 for each month the wife is under age 65 when her annuity begins.

The reduction at age 62 is 20 percent of the amount that would be payable at 65. For example, a

wife's annuity amounting to $220 at age 65 would be reduced to $176 if payment begins at age 62.

(7) Besides the age requirements, are there any other requirements for a spouse annuity?

As of the time she files an application for her annuity, a wife must be living with her husband, or receiving regular support contributions from him or her husband must be under court order to provide for her support.

There is also a requirement that a couple be married for at least 1 year unless the wife is the natural mother of her husband's child or she gave up rights to a railroad retirement survivor annuity by marrying the retired employee.

A wife must also give up any pre-retirement employment and relinquish any employment rights she holds.

(8) Are there any restrictions on the receipt of a wife's annuity?

After she begins receiving her annuity, payment is stopped for any month in which her husband's regular annuity is not payable. Also, a wife's annuity is not payable for any month in which she works for a covered employer (railroad or rail union) or for the person or company she last worked for before her annuity began.

(9) When would the payment of a wife's annuity end?

A wife's entitlement would end with the death of her husband. At that time a widow's benefit would normally be payable by either the Board or the Social Security Administration on the basis of the deceased husband's credits with both systems. A wife's annuity also ends with divorce or, of course, with the death of the wife herself.

If a wife's annuity is being paid to a woman on the basis of her caring for a minor or disabled child and the child attains age 18 or recovers from his disability, her annuity would cease to be payable until she reaches retirement age.

Direct deposit is available for annuity checks

Each month a substantial number of railroad retirement annuity checks are lost or stolen, causing considerable inconvenience to annuitants. Through the Direct Deposit Program, this type of problem can be eliminated because your checks can go directly to your bank account. The following questions and answers explain how to enroll in this program and the advantages to beneficiaries.

(1) My railroad retirement annuity check was stolen from my mailbox last month. Is there any way I can avoid this in the future?

Yes. You can have your annuity checks deposited directly into your savings or checking account at a bank, savings and loan association, Federal or State chartered credit union or a similar institution. That way, you won't have to worry about losing your check or having it stolen from your mailbox. Even when you are away from home, your check will be deposited into your account automatically and safely.

(2) How do I go about having my annuity checks deposited into my savings or checking account?

When you get your next check from the Board, take that check to the financial organization where you have your savings or checking account and ask them to help you complete Form SF-1199A for direct deposit of your check into your account. Financial organizations will have that form on hand or they can obtain copies from the U.S. Treasury Department. They will complete part of the form and you will complete the other part. It is important that you have your check with you so that all the necessary information can be correctly entered on the form. The financial organization will then send the completed Form SF-1199A to the Board and we will begin sending your checks directly to the financial organization of your choice for direct deposit into your savings or checking account.

(3) How long after I apply for direct deposit will the Board begin sending my checks for direct deposit into my savings or checking account?

It generally takes the Board 60 to 90 days to make the changes necessary for direct deposit. In the meantime, you would continue to receive your checks at

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When direct deposit begins, your check will be deposited in your savings or checking account on or about the first of each month.

(4) Would I still receive notices from the Board at home?

Yes. Initial annuity award checks, special accrual checks, and annuity adjustment checks, as well as any letters or notices from the Board, will still be sent to your home or mailing address. Only regular recurring monthly checks will be deposited in your savings or checking account.

(5) I'm planning to have my checks deposited directly into my checking account. Will I still have to notify the Board if I change my address?

Yes. It is important that you keep the Board informed of your current mailing address even though your annuity checks are sent for direct deposit into your checking account.

(6) I'll be retiring and applying for my railroad retirement annuity next month. When do I sign up for direct deposit?

Your first annuity check will be sent by the Board to your home or mailing address. When you receive that check, take it to the financial organization where you have a checking or savings account to sign up for direct deposit. It will take the Board some time to process your direct deposit form, so a few more monthly checks will be sent to your home before direct deposit begins.

(7) Can my wife, who is receiving a railroad retirement spouse annuity, have her checks deposited directly into her savings or checking account?

Yes. Any annuitant receiving recurring monthly checks from the Board can have these checks deposited directly into his or her savings or checking account. This includes employees and their wives as well as widows and other survivor annuitants.

(8) I plan to have my checks deposited directly in my checking account. If I later change my mind, can I have checks sent to my home?

Yes. Simply notify the Board in writing that you wish to have your annuity checks sent to your home.

(9) Are all banks required to participate in the Direct Deposit Program?

No. Banks and other financial organizations participate in the Direct Deposit Program voluntarily.

Use caution in obtaining home mortgage funds

By Sidney Margolius

Deposits are pouring into banks and savings associations to an extent that these lenders presently have more mortgage money on hand than applicants to borrow it. Because of the big cash supply, banks have sharply cut the "prime" interest rates on business loans. The Federal Government, too, is paying much less than a year ago on its borrowings.

Yet mortgage rates remain close to record highs, and along with high costs of houses, are effectively barring most young families from buying homes or co-op apartments. Those who do must pay double or more the 4-5% mortgage rates their parents paid 25 years ago.

The slogan of the U.S. League of Savings Associations is, ironically enough, "The American Home: The Safeguard of American Liberties." But there's no way the average American now can afford this safeguard.

With new houses typically $40,000 and much more in the large cities, and even resales now averaging $38,000, most buyers would need at least a 30-year mortgage. But as we've pointed out before, on a $30,000, 30-year mortgage at 9%, you have to repay a total of $87,000. A typical family with income of about $11,500 a year after taxes would have to work five years just to pay the $57,000 in interest.

We asked Norman Strunk, executive director of the Savings Association League, why the mortgage rate doesn't come down in view of the increased supply of lendable funds, and the drop in the prime rate.

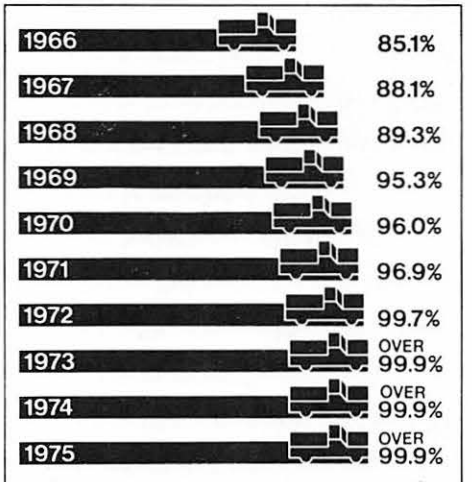
The mortgage rate has come down a little, Strunk replied. The national average for conventional mortgages (non-government insured) was 8.8% at the end of 1975 compared to 9.1 in January, 1975. For older homes the average has declined from 9.4% to 9.1.

Loan fees (an extra charge) are also dropping, Strunk says, from 1.7% on new construction to 1.6%, and from 1.6 on existing homes to 1.4. One reason for the "stickiness" in home mortgage rates is that savings associations have lots of other places to invest their funds that will yield 9%. Also, the associations are the only institutions doing much mortgage lending except for mutual savings banks in states that have them. Commercial banks and insurance companies haven't been active mortgage lenders in recent years. They've had too many other profitable fish to fry.

Moreover, according to Strunk, the associations are paying current depositors high rates, an average of 6.3%. The average is brought up by the rates of as much as 7.75% paid on long-term

OUR TOUGH CHEVY PICKUP IS A TRUCK WITHIN A TRUCK.

A Chevy pickup is tough in the right places. With two steel walls in the Fleetside tailgate, body sides, doors, front fenders and hood. Plus extensive rust protection throughout.



Chevy has an impressive record for building trucks that last. The chart above shows the percentage still in use in each of the 10 most recent model years recorded. 96% of all Chevy trucks registered during those model years were still in use on July 1, 1975 as reported by R. L. Polk & Co.

Cargo box has a full inner wall of steel extending all the way up the body side on Fleetside pickups. It protects the outer wall from dents.

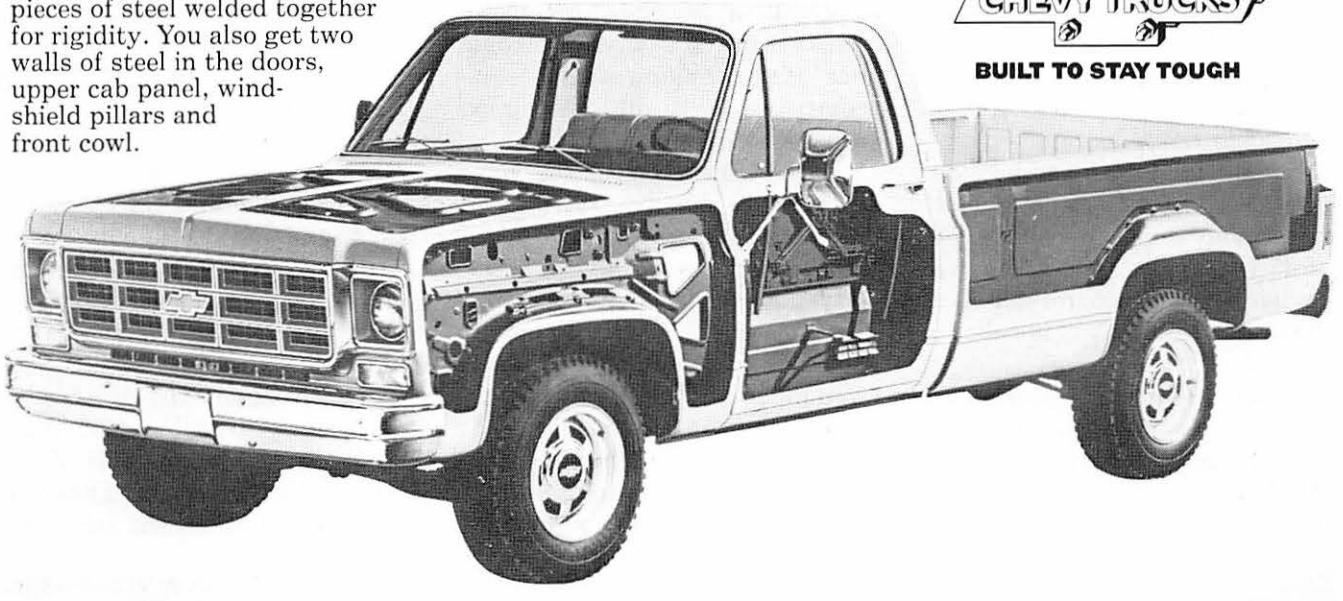
Front fenders have an embossed inner wall of steel under the exterior sheet metal. Plus a self-washing inner fender skirt to help protect engine compartment from salt spray and flying stones.

Hood is fabricated from two pieces of steel welded together for rigidity. You also get two walls of steel in the doors, upper cab panel, windshield pillars and front cowl.

For protection against rust, inner surfaces of both inner and outer front fenders are sprayed with a zinc-rich primer before assembly and final priming. And pickup box steel floor, sidewalls, front panel and tailgate are totally immersed in an electrically charged primer, drawing paint into seams and crevices for corrosion protection.

CHEVY TRUCKS

BUILT TO STAY TOUGH



certificates of deposit. The associations in turn have an average yield on mortgages of 7.6%. While they currently get close to 9%, the average is reduced by the lower returns on older mortgages.

The League believes mortgage rates "may inch downward over the year," but for the foreseeable future, "we don't think a sharp drop is in the cards," Strunk says.

The associations may be wrong. If they and the savings banks won't be able to lend at present rates—and they won't—rates will be forced down. If not, the public will have to bypass the associations and banks by encouraging pension funds, credit unions, and government agencies with large reserves of loanable funds, such as the Social Security and Veterans' Administrations, to lend directly to home buyers.

The higher the rate and the longer the term, the longer it takes to build up any real equity in a home. As the adjoining table shows, on a 30-year mortgage at 9%, even after 15 years you've paid off only 21% of your debt, with 79% still owing. With a 7%, 25-year mortgage you'll have paid off 39% with 61% owing. Certainly house-hopping and mortgage refinancing now are less profitable for homeowners.

PER CENT OF MORTGAGE STILL OWED

Rate	After 5 Yrs	After 10 Yrs	After 15 Yrs	After 20 Yrs	After 25 Yrs	After 30 Yrs
			Life of Mortgage—30 Years			
7%	94	86	74	57	33	0
8	95	88	77	60	36	0
9	96	89	79	63	39	0
10	97	91	82	66	41	0
			Life of Mortgage—25 Years			
7%	91	79	61	36	0	
8	92	81	64	38	0	
9	93	83	66	40	0	
10	94	85	69	43	0	

Watch out for tricky mortgages

With the price tag on the typical new home now $50,000 and mortgage rates stubbornly hovering at 8.5 to 9%, even with the recent FHA reduction, lenders are pushing gimmick-loaded mortgages which pose a real danger to home buyers.

Some lenders want to increase mortgage terms to as long as 40 years with a balance at the end of 25 years which the homeowners would have to refinance at the current rate. This is called a balloon mortgage.

Another dangerous proposal is variable-rate mortgages in which the rate moves up or down with the general level of interest rates. As we've previously warned, the hazard to moderate-income homeowners is that they could not count on a set mortgage payment. In a period of rising interest rates, the payment could rise faster than a family's income, just when other living expenses are rising.

Variable-rate mortgages have become especially widely-used in California, but have been spreading to other states. Pennsylvania, New Jersey and Vermont adopted such automatic flexible rates earlier this year. A number of other states already permit them. Only the fact that this was an election year may have saved the public in several other states from similar breaches of fixed rates, which savings associations and banks are pressing for.

The U.S. Housing and Urban Affairs Department (HUD) is experimenting with a third new gimmick that seems to ease payments but actually adds to the final cost, warns Henry Schechter, AFL-CIO Urban Affairs Director. Schechter has been doing yeoman work for the entire U.S. public by revealing the hazards of such gimmicks. He points out that under the plan being tried out by HUD, a homeowner would start with payments of $223 a month the first year on a $35,000 mortgage at 8.5%. The payments would rise 3% a year until the 11th year when it would level off at $300 for the next 20 years.

The idea is to make the payments easier in the first few years. On the standard fixed-rate mortgage still most widely used, the payment would be $269 from the beginning. The borrower would repay a total of $96,840 to clear up the original $35,000 mortgage.

That's bad enough. But under the experimental sliding payment plan, the borrower would repay a total of $102,768 Schechter points out. That's over $5,000 more.

Still another mortgage gimmick was proposed in the last session of Congress by Senator Bill Brock (R., Tenn.). This one would combine a variable interest rate with a deferred payment plan. It would result in a large debt to the government when the original mortgage is paid up, AFL-CIO Legislative Director Andrew Biemiller warned in Congressional testimony.

Unfortunately, Consumers Union, which usually does a more accurate job of evaluating products and services, last year came out in support of variable mortgages. CU called guaranteed interest rates for the full life of a mortgage "a luxury bought at the expense of savers, who earn

an artificially low return on their savings, and, during periods of tight money, at the expense of those homebuyers who can't get a mortgage at any interest rates."

Actually there is no more dangerous proposal to moderate-income families. They would benefit very little from any higher rates on their small savings in the savings associations and banks that these lenders might pass on, but would have potential difficulty in budgeting for, and possibly even meeting payments if interest rates rose.

Schechter is more perceptive and realistic than CU. He says that the only real cure for the problem of high interest rates is a national monetary policy that would result in lower rates in general.

Meanwhile, if you're looking for a mortgage and the various lenders in your area insist on a variable rate, try to protect yourself the best you can by seeking (1) some concession in the initial rate in return for the variable ceiling; (2) a tight limit on how high the variable rate could go; (3) a right to prepay the mortgage without a severe financial penalty.

The new FHA rate is 8.5% including the one-half of 1% premium which you have to pay FHA to insure the lender against any loss. This rate is a little better than the 9% or more usual on conventional mortgages in many localities, if you can get the lender to make an FHA mortgage. Sometimes large developers or tract builders are able to get such lower-rate mortgages.

Let's face it!

TO PROTECT THE UNBORN AND THE NEWBORN

March of Dimes

People

DENVER & RIO GRANDE WESTERN: **L. A. Abrams,** application engineer, General Railway Signal Co., appointed signal training supervisor.

BURLINGTON NORTHERN: **James A. Bradley,** signal supervisor, at Helena, MT has retired. **Charles W. Hale,** signal supervisor, at Havre, MT has retired.

ELGIN, JOLIET & EASTERN: **Michael Palya,** signal supervisor, at Joliet, IL has retired.

MILWAUKEE ROAD: The following men have been appointed division supervisors of signals: **J. Fromader** at Milwaukee, WI; **W. C. Gianonetti** at Deer Lodge, MT; **C. L. Imhauser** at Tacoma, WA; **D. F. Marien** at Minneapolis, MN; **R. R. McConnahay** at Perry, IA; **P. G. Ness** at Aberdeen, SD; and **R. D. Scott** at Galewood, IL.

NORFOLK & WESTERN: **Glenn E. Rauh,** assistant to regional engineer signals & communications at St. Louis, MO,

Jack M. Payne
Un. Sw. & Sig.

John J. O'Rourke
Un. Sw. & Sig.

appointed regional engineer S&C at Cleveland, OH succeeding **J. A. Sattler,** retired. **Herbert D. Wiggins,** assistant division engineer S&C at Decatur, IL appointed assistant to regional engineer S&C with headquarters remaining at Decatur. **Hayward D. Hammer,** supervisor S&C at Decatur appointed assistant division engineer S&C there.

THE OKONITE COMPANY: **Robert A. Martin** appointed manager midwestern railroad sales. **William E. Roka** appointed manager northeast railroad sales with headquarters in Philadelphia, PA.

UNION SWITCH & SIGNAL DIVISION - WABCO: **Jack M. Payne,** assistant manager purchasing department, Missouri Pacific, appointed account representative for Pittsburgh area sales. **John J. O'Rourke,** formerly of CP Rail signal department, appointed account representative with headquarters in Montreal, Quebec.

WESTERN - CULLEN DIVISION, FEDERAL SIGNAL CORP.: **Arneil K. McGowan,** supervisor signal, electrical & communications, Belt Railway Co. of Chicago, appointed product manager S&C signal and communications.

WESTERN PACIFIC: **E. A. Thompson,** supervisor signals at San Francisco, CA received a 40-year service pin from the railroad.

General Committee & Local Lodge News

Those in attendance at the SP-WP-PE general committee included (seated left to right): J. T. Bass, vice president, BofRS; V. Van Artsdalen, general chairman; A. M. Dickey, local 92, general committee secretary-treasurer; O. C. Lewis, local 179 WP, vice general chairman; and retired general chairman W. E. Crawford. Standing (left to right) are: J. H. Mullen, local 152; C. I. Young, local 34; L. J. Mortenson, local 126; E. H. Phillips, local 104 (behind Mortenson); J. Hicks, local 104; P. O. Gowen, local 192; M. H. Sutton, local 170; G. Bozaan, local 100 PE, vice general chairman; and L. H. Carmichael, local 179.

Brother W. E. Crawford (right) congratulates V. Van Artsdalen new general chairman for the SP-WP-PE general committee.

Vice President J. T. Bass (left) conducted the installation of the new SP-WP-PE general chairman V. Van Artsdalen (center) shown here with retiring general chairman W. E. Crawford.

Van Artsdalen succeeds Crawford on SP

At the November 1976 meeting of the general committee of Southern Pacific-Western Pacific-Pacific Electric, W. Van Artsdalen, local chairman, Sacramento Lodge 179, was elected general chairman to succeed W. E. Crawford, who retired, effective Dec. 1, 1976. In addition to the election and other matters of business, the three-day general committee meeting held a retirement dinner to honor Brother Crawford for his many years of service. He had been general chairman for almost 10 years. In addition to a cash award and gifts, Brother Crawford received a 40-year pin from Lee W. Sloan, assistant vice president labor relations, Southern Pacific. Also, he was presented with letters of commendation for his fine work and service and congratulations for a well-earned retirement with the best wishes for many healthy, happy years ahead. Letters were from BofRS officers who were unable to attend the retirement dinner, railroad officers and other general chairmen.

L. V. Tisor (left) receives gift from J. L. Elpel, regional engineer signals, BN, at a retirement party in Billings, MT.

St. Paul Lodge 87 honors L. V. Tisor on retirement

L. V. Tisor, signal maintainer at Laurel, MT, and for several years had served as recording and financial secretary of St. Paul Lodge 87, was honored at a retirement party on July 31, 1976. Brother Tisor had 34.5 years of service with the former Northern Pacific and the present Burlington Northern when he retired. At the retirement party at the Northern Hotel in Billings, Brother Tisor received a yellow gold tie tac with "BN" initials and an inset diamond. J. L. Elpel, regional engineer signals, BN, presented the tie tack to Brother Tisor as a memento of his retirement and long years of service to the railroad.

SP Lodge 34 receives its charter, installs officers

Twelve members of Southern Pacific Lodge 34 attended the installation of officers and the presentation of its charter by BofRS Vice President John T. Bass and General Chairman W. E. Crawford on July 24, 1976. At the meeting in Klamath Falls, OR, W. T. Buehling, second vice

Second vice chief signalman W. T. Buehling holds the charter for Lodge 34. On his left is general chairman W. E. Crawford. Others shown here are (far left) D. R. Thomas and J. T. Bass, BofRS, vice president.

At the SP Lodge 34 charter presentation shown here (left to right) are: W. E. Crawford, general chairman; C. I. Young; W. T. Buehling, second vice chief signalman; D. W. Crowe, trustee; M. V. Lockhart, recording and financial secretary; and J. T. Bass, vice president.

chief acted as chief signalman. Brother G. T. Fortin acted as chaplain and Brother D. R. Thomas acted as lever.

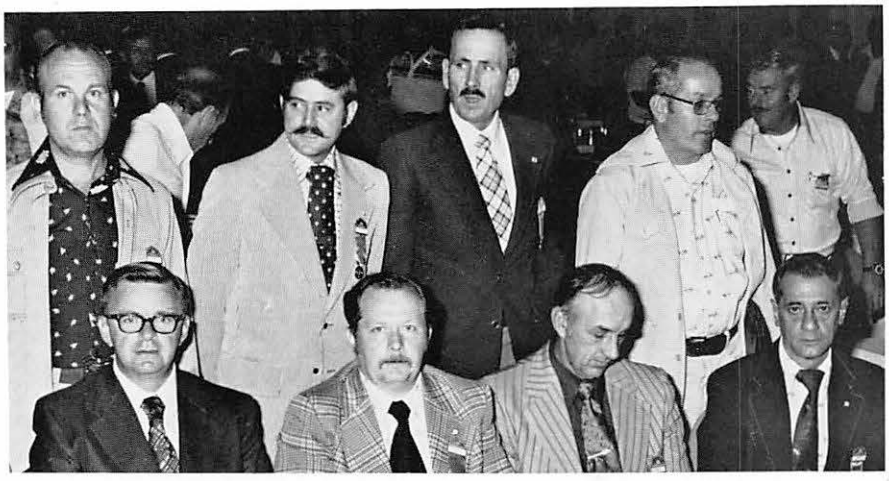
More Convention Delegates

Baltimore & Ohio delegates to the Quebec convention are shown here, left to right: J. R. McDonald, general chairman; J. R. Bishop, local 94; G. H. Schmitz, 94; H. W. Rupp, 94; D. Leonard, vice general chairman, 31; W. F. Hogan, Jr., 31; and D. J. Hammond, 94.

Union Pacific delegates and their wives were photographed just before the banquet at the annual Signalmen's convention in Quebec. Shown here (left to right) are: Mrs. W. R. Evans (her husband is standing behind her); Mrs. W. G. Linder (her husband is standing to her left and behind her); M. W. Brown of Local 8; J. W. Welch (hand on rail) and Mrs. Welch (in front of him with her right hand on the railing); Mrs. L. M. Priel (her husband is directly behind her); Mrs. M. T. Best (her hand is on the railing) and her husband is standing on her left; Mrs. F. W. Olson (standing behind Brother and Mrs. M. T. Best); and Brother Olson is behind and to the left of Brother Best); Mrs. L. C. Sedlacek (both hands on railing) and General Chairman Sedlacek (standing behind her and to her left); W. M. Lucas of Local 8; and N. Hansen of Local 111. Standing at the rear are (left to right): J. T. Bass, BofRS vice president; C. J. Chamberlain, BofRS, president; and O. E. Anderson of Local 111.

Illinois Central Gulf delegates to the Quebec BofRS convention shown here include: Seated (left to right)—D. H. Lattner, local 29; K. G. Williams, 29; I. S. Nicholson, 51; and B. J. Woodruff, general chairman. Standing (left to right) are—P. V. Allred, 162; J. N. Etcheson, 81; and J. H. Croxton, 46.

Missouri Pacific Lines delegates at the Quebec convention of Signalmen included the following: standing, left to right—I. H. Shaver, MP (local 206); H. L. Whitfield, MP (72); R. N. Baker, general secretary, MP; W. D. Best, vice president, BofRS; G. W. Holmes, MP (72); O. Lundsford, Jr., MP (72); and C. W. Files, MP (72). Seated, left to right are: P. G. McMahon, MP; G. R. Jones, T&P, (141); J. S. Duplichan, general chairman, MP Gulf Lines, HB&T, GH&H; J. J. Morris, general chairman, T&P; W. D. Corn, general chairman, MP; and M. E. Hyde, general chairman, C&EI.



Erie Lackawanna delegates to the BofRS Quebec convention in August shown here —standing (left to right) are: A. Azzi, local 145; S. J. Muzi, general chairman; J. R. Downs, vice general chairman; J. H. Leach, 145. Seated (left to right) are: J. D. Smith, 145; J. W. Miller, 88; W. J. Bossman, 37; and J. Silvestri, 88.

News

Lauer and Britcher appointed to Grand Lodge offices

W. W. Lauer, vice general chairman, Burlington Northern, and Chairman of the Grand Lodge Board of Trustees, has been appointed to a position of Grand Lodge Representative with headquarters at Mt. Prospect, IL, effective April 1, 1977.

As a result of this appointment, a vacancy was created on the Grand Lodge Board of Trustees and B. E. Britcher, general chairman, ConRail, was appointed to a position of Trustee, effective April 1, 1977.

The appointments were made by President C. J. Chamberlain, with the unanimous approval of the Brotherhood of Railroad Signalmen's Executive Council.

"Brothers Lauer and Britcher have been extremely active in Brotherhood affairs and have demonstrated their abilities to represent the interests of our membership. We are extremely pleased that they have accepted the appointments and joined our Grand Lodge team in their new capacities," Chamberlain said.

Brother Lauer, a native of Nebraska, was born in Franklin on July 25, 1926. After graduating from Lincoln, NE high school in 1944, he entered the U.S. Army and served with the 235th Engineer Battalion of the 84th Division. Upon returning from military service in 1946, he attended the University of Nebraska before joining the former Chicago, Burlington & Quincy as a signal helper in November 1949. Two years later, he was signal maintainer at Fort Morgan, CO. Also, he held other maintainer positions at Seneca and Omaha, NE. In 1957, Brother Lauer was promoted to signal inspector-system with headquarters at Monmouth, IL, the position he held at the

Brother W. W. Lauer was chairman of the Committee on Laws at the BofRS 40th annual convention in Quebec last August.

time of his appointment to grand lodge representative.

Brother Lauer has been very active in Brotherhood affairs since joining Lincoln Lodge 119 in 1950. He held the offices of lever, chaplain, inside and outside semaphore. In 1963, he became local chairman of construction lines west and three years later was elected general chairman of the CB&Q. Following the merger of CB&Q into the Burlington Northern, Brother Lauer was elected vice general chairman of the BN general committee in 1974. He was a delegate at large at the 1967 and 1970 BofRS annual conventions. In 1970 he was elected a trustee and secretary of the Grand Board of Trustees. In 1972, he was elected chairman.

Active in civic and fraternal affairs, Brother Lauer has served on the Seneca, NE school board; a member of the executive board of the Gibson Woods Golf Course; held various lay positions in the Methodist Church; and is a member of Elks Lodge 397, Masonic Lodge No. 288 Omaha, NE, and the Scottish Rite and Tangier Shrine Lodge in Omaha.

Brother Britcher was born at Newport, PA on Nov. 3, 1927. After graduation from Newport High School, he worked at the Mechanicsburg Naval Supply Depot. He spent three years in the U.S. Navy, 1945-48 and attained the rank of Yeoman Second Class. Returning from the Navy, Britcher held several jobs before joining the signal department of the Pennsylvania Railroad in 1955. He held several communication and signal positions. He was working as a C&S section maintainer when he was elected general chairman in 1972.

Brother Britcher was local chairman of Capitol City Lodge 50 from 1966 to 1972. He was vice chairman of the Pennsylvania general committee from 1970 until he became general chairman on Dec. 1, 1972. He was re-elected to a 3-year term of office in 1975. Also, he is currently serving as the Pennsylvania state legislative representative for the BofRS. At the BofRS 1970 convention, Brother Britcher served

Brother B. E. Britcher, newly appointed trustee, was a delegate at large at the 40th annual convention of the BofRS in Quebec last August.

on the Credentials Committee; at the 1973 convention, he served on the Committee on Committees; and at last year's convention in Quebec, he was chairman of the Committee on Rules and Order of Business.

As a sports enthusiast and activist, Brother Britcher has played baseball, basketball and football. For seven years, he coached American Legion Baseball teams. He is a member of the board of directors of the Susquenita Midget Football Association, as well as chairman of the Duncannon Borough Recreation Board. He is a member of Duncannon American Legion Post No. 340, and of Christ Lutheran Church.

Brother Britcher has been a resident of Duncannon, PA all of his 29 years of marriage. He and his wife Betty are the proud parents of two daughters: Robin, 23, and Kelly, 13; and two sons, Andy, 27, and Mark, 22.

BofRS research director to speak at university

John E. Hansen, BofRS director of research, will be one of the speakers at a Labor Education Program titled "Legislative and Political Activities for Railroad Unionists." The 6-week course at Chicago's Circle Campus of the University of Illinois will run for six Mondays, 7 to 9:30 p.m.: March 14, 21, April 4, 11, 18 and 25. The instructor is William J. Donlon, general counsel, Brotherhood of Railway, Airline & Steamship Clerks. Cost of the course is $22.

Other speakers, covering the national political scene, are: Donald S. Beattie, director of government affairs, Railway Labor Executives' Association; James Kennedy, legislative counsel, BRAC; and J. R. Snyder, national legislative director, United Transportation Union.

Milwaukee seeks funds to upgrade signaling

Milwaukee Road has filed an application with the Federal Railroad Administration to seek funds under Sections 505 and 511 of the 4R Act to upgrade track and install centralized traffic control between Milwaukee, WI and Newport, MN, some 314 miles. The ctc project would be carried out over three years at an estimated total cost of $12,-210,048. Most of the line would be reduced from double track to

single track with passing sidings averaging 7 miles long. New ballast, ties and continuous welded rail would be installed. With the new signaling and upgraded track Amtrak passenger trains could operate at 79 mph and freight trains could operate at 60 mph. Chicago & North Western and Rock Island have shown interest in operating some of their Chicago-Twin Cities trains over this proposed rehabilitated Milwaukee line.

Frisco to spend more than $1 million on ctc project

St. Louis-San Francisco Railway is planning to spend $1,652,-900 during 1977 on the installation of centralized traffic control between Edward, KS and Elwood, MO, about 92 miles. This will complete the installation of ctc between Kansas City, MO and Birmingham, AL. As part of the project, computer-controlled video display ctc consoles will be installed to replace conventional miniature-lever consoles in the dispatching office at Springfield, MO. This new video ctc display equipment will control the territory between Kansas City and Memphis, TN.

Pittsburgh will be site of BofRS regional meeting

Saturday, September 17, 1977 will be a day of interest to all members of the Brotherhood of Railroad Signalmen in the Pittsburgh, PA. area. On that day a regional meeting will be held. The meeting will be held at the Sheraton Inn-Airport, located at 1160 Thorn Run Road Extension, Coraopolis, PA.

San Francisco to be site of C&S sectional meeting

The western sectional meeting of the Communication & Signal Section, AAR, will be held Wednesday, April 20, 1977, at the Towne House hotel in San Francisco, CA. M. C. Blanton, general superintendent communications-system, Southern Pacific Transportation Co., is chairman of this meeting.

Amtrak calendar is now available

A beautiful 4-color picture of an F40PH diesel-electric locomotive pulling Amfleet cars with a searchlight signal in the foreground and an interlocking tower in the background are mounted above the full 12 months of 1977. The 1977 calendar measures 24 inches wide by 33 inches deep. The water color painting is by artist Gil Reid. The calendar is printed on heavy paper and the painting (16 by 23 inches) can be cut off and framed when 1977 is over.

Cost of the calendar is $3.50 plus local sales tax. Check or money order for Amtrak calendar should be sent to Western Folder, 850 W. Fullerton Ave., Addison, IL 60101.

Philadelphia to be site for C&S sectional meeting

The eastern sectional meeting of the Communication & Signal Section, AAR, will be held Thursday, May 5, 1977 at the Sheraton hotel in Philadelphia, PA. Chairman for the meeting will be R. C. Karvwatt, director communications services, ConRail.

Chicago to be site of BofRS regional meeting

On Saturday, April 30, 1977, the Brotherhood of Railroad Signalmen will hold a regional meeting at the Pick Congress hotel in Chicago, IL.

Los Angeles to be site of Signalmen's meeting

A regional meeting of the Brotherhood of Railroad Signalmen will be held Saturday, May 14 at the Hilton hotel in Los Angeles, CA.

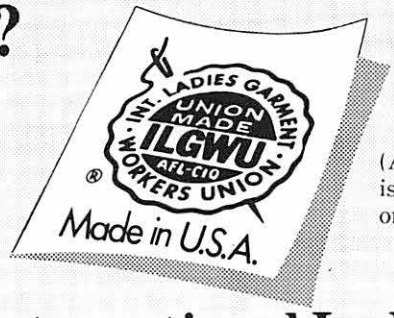
Southern to spend $4.5 million on ctc project

Southern Railway is planning to spend $4.5 million in 1977 to install 144 miles of centralized traffic control between Birmingham and Sheffield, AL.

Hopkins replaces Dempsey at carrier labor group

Charles I. Hopkins, Jr., vice president for personnel at Flying Tiger Airlines, has been appointed chairman, National Railway Labor Conference, effective April 1, 1977. Hopkins succeeds William H. Dempsey, who becomes president and chief executive officer of the Association of American Railroads. NRLC is the railroads' bargaining arm in labor negotiations with railway unions.

If union families don't look for the union label, who will?



(Anything without it is either non-union or non-American.)

International Ladies' Garment Workers' Union

Union Label Department, 22 W. 38th Street, New York, New York 10018

News About Members

Stanley Rosen (left), associate professor and coordinator, Chicago Labor Education Program, congratulates W. B. Harwell, Jr., (center) BofRS, grand lodge representative, who received a Special Certificate for completing the program at the University of Illinois' Chicago Circle Campus. Also joining in on the congratulations is William J. Adelman, (right) associate professor, U of I, and program associate.

W. B. Harwell graduates from labor program

W. B. Harwell, Jr., BofRS grand lodge representative, has graduated from the University of Illinois' Chicago Labor Education Program. On Feb. 3, Harwell received a Special Certificate in Labor Studies resulting from five years' study at the University's Chicago Circle Campus.

Former NYC signalman attends 10th convention

Brother Howard M. Friedel, retired leading signal maintainer, from Utica, NY attended his tenth BofRS convention last August at Quebec City. Beginning with the 1950 convention, Brother Friedel had attended every convention except the 1967 meeting. Always active in Brotherhood affairs, he had served as secretary-treasurer of UTK Lodge 86 from 1947 to 1951, and as local chairman from 1952 to 1974, when he retired. Also, he was active in the old former New York Central Lines East general committee serving at various times as general secretary, general secretary-treasurer and (1954-1963) and general treasurer (1963-1974). Brother Friedel began work on the Mohawk-Hudson division of the New York Central in 1941 as a signal helper. He advanced through the positions of assistant signalman, mechanic, maintainer, leading signal maintainer and foreman.

Four former New York Central Lines East signalmen were "caught" by the camera at the Quebec City convention of the BofRS in August 1976. They are (left to right): C. K. Kiernan, retired assistant general chairman, Penn Central; B. H. Steuerwald, retired special representative, BofRS; W. B. O'Connell, retired grand lodge representative, BofRS; and H. M. Friedel, retired leading signal maintainer, PC.

Retired C&NW maintainer is author of two books

Most people in their nineties are content to sit and watch the world go by. Not so with retired signal maintainer Gustave Telschow. A member of Madison Lodge 39 and a former maintainer at North Lake, WI for the Chicago & North Western, Brother Telschow has written two books. One, a novel titled "Enjoying What Comes Naturally," concerns people in the pioneer days. This was published in 1976, while an historical account of people living around Elroy, WI, was published in 1965.

Of German parentage, Brother Telschow was born June 18, 1884 on a farm near Elroy, WI. He began work for the C&NW

At 92, Brother Gustave Telschow says he will live to be 120 if he keeps on smiling.

in 1908. In 1925, he left Elroy to work on the Chicago-Omaha mainline to help install the cab signal and train control system. He returned to Wisconsin and settled in North Lake, about 25 miles west of Milwaukee. He retired in 1947.

Writing comes naturally to Brother Telschow. He says his talent "comes from the heart." For the past 24 years he has written many articles on bees averaging about four articles per year in the magazine "Gleanings in Bee Culture."

For the past 3½ years, Brother Telschow has been a resident of the St. Michael's Lutheran Home in Fountain City, WI.

Retired maintainer receives Rotary Club award

Walter Apostolik, retired signal maintainer for the former Delaware, Lackawanna & Western, received a certificate and a medal in recognition of attainment as "Paul Harris Fellow of the Rotary Foundation." Brother Apostolik, of Mt. Arlington, NJ, was a member of the Roxbury Rotary Club for 12 years, after which he left to become the founder and a charter member of the Lake Hopatcong Rotary Club. The Paul Harris Fellow status is awarded to an individual who contributes or in whose behalf is contributed $1,000 or more in any one year to the Rotary Foundation, if the trustees of the club recognize the individual as having rendered significant services to the club. Brother Apostolik is the second member of the Lake Hopatcong Rotary Club to receive this award. Presently, he is on the board of trustees of the Lake Hopatcong Historical Society and past president of that society and of the Lake Hopatcong Chamber of Commerce. Brother Apostolik is a member of Two Rivers Lodge 88 and was a member of former Lodge 68.

Brother Walter Apostolik (center) receives "Paul Harris Fellow of the Rotary Foundation" award from Max Muller (left), past president of the Jefferson Rotary Club. Joe Levitino (right) president of the Lake Hopatcong Rotary Club watches.

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LAMPS—MECHANISMS

Norfolk & Western delegates and their wives are shown here just before the Signalmen's annual banquet at the 40th Regular Convention in Quebec (left to right) are: K. E. Beckett, local chairman, Lodge 201; Mrs. Beckett; H. H. Hock, local chairman, Lodge 166; Mrs. Hock; R. E. Markle, local chairman, Lodge 77; Mrs. Markle; Mrs. W. D. Pickett; W. D. Pickett, secretary-treasurer, Lodge 77; Mrs. Bath; W. P. Bath, local chairman, Lodge 169; and V. J. Sartini, general chairman.

Milwaukee Road delegates to the BofRS Quebec convention included (standing, left to right): R. R. Retzleff, local 61; and R. Darr, local 219. Seated, left to right, are: A. D. Kast, local 4; L. T. Davies, general chairman; and G. Van Dyke, local 219.

More Convention Delegates

CORRECTION: Agreement Book page Mc-46-76

On page Mc-46-76 of the Green Master National Agreement Book, the word "not" should be deleted from the fourth line on the page. The line now reads: " '73 Exhibit, they do not appear on '76 Exhibit."

NEWS from CANADA

Railway pension report is issued

The report of the Industrial Inquiry Commission into Canadian railway pension plans was released Jan. 20, 1977. The report was prepared by Dr. Noel A. Hall. BofRS Vice President John E. Platt, has reserved comment on the report, except to say that "our initial reaction is one of extreme disappointment in that Dr. Hall did not recommend cost-of-living indexing for pensioners." Below is a resume of the report prepared by an actuary.

The Commissioner's report can be considered in two general parts. In the first part, he makes a number of general observations and then comments on a comparison of the CN and CP plans with two groups of pension plans of major Canadian employers, one group being public-sector and the other private sector. This part of his report concludes with four recommendations regarding benefits paid by the CP plan and a recommendation that the pension funds for both the CN and CP plans should be administered by an independent trust company.

The second part of the report gives in considerable detail the results of cost estimates for the present plans and for various indexing and survivor benefit proposals. These estimates were prepared by his own actuaries (Paterson, Cook Limited) based on data supplied by the railway companies and on actuarial assumptions and methods which they (Paterson, Cook Limited) considered to be appropriate. This part of the report concludes with a refusal to make any general recommendation that the railway plans be required to adopt indexing but a recommendation instead that the companies and the unions work out an agreement to create something he describes as a "Heritage Fund" to help alleviate the hardships of current pensioners. He also makes a suggestion regarding the representation of pensioners interests in protecting and furthering their benefit rights.

Dr. Hall emphasizes in a number of places that he regards the collective bargaining process as the appropriate place for the resolution of most pension plan problems and the forum where plan improvements should properly be negotiated. He says repeatedly that the bargaining agents are the proper representatives of the employees' interests (he does not really come to grips with the representation of non-organized employees) and this leads him to the position that his recommendations and conclusions should not include any matters which can properly be dealt with through collective bargaining (e.g. the level of employee and employer contributions, retirement age and service conditions, retirement and survivor benefits, integration with CPP/QPP) unless it is a recommendation to deal with a situation

—where "glaring inequities" exist, or

—where the interests of retired employees appear not to have been well served through collective bargaining, or

—where the railroad pension plans "appear to be at variance with desirable public policy."

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His four recommendations on the benefits paid by the CP plan are as follows:

(1) Pensioners should receive ad hoc increases comparable to those paid by CN.

(2) The terms of the survivor benefit should be changed to eliminate the provision that the benefit ceases on the remarriage of the survivor.

(3) The "deathbed marriage" provision for survivor benefits should be reduced from 5 years to 1 year.

(4) The upper age limit for eligibility to participate in the plan should be increased from 40 to 60.

These changes would, in each case, bring the CP provisions more or less exactly into line with the CN.

Dr. Hall's recommendation on trusteeship is based on a finding that the railways' practice is out of line with the practice of most other employers. He comments that the CRLA proposal of a committee of individuals representing the companies, the various employee groups and the pensioners was initially an attractive one for him but that he eventually rejected because of

—the elusive "corporate identity" of such a group

—the problem of ensuring satisfactory accountability

—the difficulty of ensuring that the group would be truly representative, especially with regard to non-organized employees.

In the second part of Dr. Hall's report, what he does is essentially to demonstrate in great detail that the costs of providing indexed benefits under certain assumed conditions of inflation are very substantial as compared to the costs of constant-dollar or non-indexed benefits under those same assumptions. He then decides that any recommendation by him to require indexing would impose an unduly heavy cost on the companies, so he passes on to his "Heritage Fund" concept. Before describing that concept, it should be pointed out here that the costing procedure on which his conclusion is based is open to serious objection. In its last submission to Dr. Hall, the CRLA argued that the proper basis for cost comparison is one which compares the cost of indexed benefits under conditions of inflation with the cost of non-indexed benefits under conditions of no inflation. The companies objected to this proposition but did not refute it. The Commissioner either did not understand it or has chosen for reasons of his own, to ignore it. The principal economic assumptions on which his actuaries have based their cost calculations are as follows:

(Annual Rates)	1974-79	1980-84	1985 onwards
Consumer Price Index increases	8%	5.5%	3%
General wage and salary increases	10	7.5	5
Investment return	10	8.5	6.5

The use of a costing of non-indexed benefits (i.e. the present plans) on this basis as a benchmark for comparison with a costing of indexed benefits is extremely vulnerable to attack, on the grounds that it presupposes the acceptability of a long-term rate of investment return which includes an inflation component with no provision to compensate pensioners for the assumed inflationary erosion of their benefits. The companies' present plans require them to provide benefits according to the specified formula, whether inflation occurs or not. If continual inflation occurs and benefits are not indexed, the companies' real costs are ultimately reduced as compared to what they would be if such inflation does not occur. Why should this reduced measure of cost be taken as the benchmark? The Commissioner's report does not say, nor do the comments of his actuaries in justifying the basis chosen.

The "Heritage Fund" proposal is predicated on a permanent levy of 1% of current payroll, half to be paid by the companies and half by the employees. Its main purpose would be to provide for full past COLA adjustments to current pensioners, deferred pensioners and survivors, excluding adjustments already granted (which are less than full past COLA). The Heritage Fund would be administered in conjunction with the existing pension funds but accounted for separately. Any surplus in the Heritage Fund would be used to "help finance future pension plan improvements."

The proposal is obviously a stopgap compromise which does not provide a fundamental or long-term solution to the problem posed by prospective inflation for future generations of pensioners. However, it would achieve a measure of relief for the present pensioner group and as such, would be a better alternative than no action at all. There is an obvious "political" question as to whether active employees would be prepared to contribute ½% of pay with no assurance that their own pensions would be "inflation-proofed" at least to some degree.

Lastly, on the question of effective representation of pensioner interests, the report makes no specific recommendation but does describe in some detail the "Retired Worker Chapters" of the UAW and clearly favors the establishment of a similar organizational structure for railway pensioners. The Commissioner notes that these Chapters have a representative (with a vote) on Local Union Executive Boards and the Local Union Pres-

Appendix—Specimen Cost Results

The following table displays selected costs applicable to 1975 payrolls based on the actuarial assumptions and methods adopted by the Commission's actuaries. The dollar costs are in $ millions and the percentages represent ratios of these costs to 1975 payrolls.

	CN		CP	
	$	%	$	%
Current provisions	154.0	17.09	93.9	18.33
2% formula for all (including pensioners), no COLA	180.2	20.00	105.3	20.56
2% formula for all, past COLA only	213.1	23.65	128.8	25.15
2% formula for all, past and future COLA	377.8	41.92	218.6	42.68
2% formula for all, "delayed" * (25%) indexing	270.2	29.80	156.2	30.49

*This provides COLA indexing beginning only after the purchasing power of benefits has fallen by 25%, and based only on the remaining 75% of purchasing power.

ident (or his designate) is a member of the governing board of the Retired Worker Chapter. The Commissioner does not mention (but it is a fact) that the UAW "pattern" plans in the auto and farm implement industries have in recent settlements applied the same improvements to pensioners as to active employes. The Commissioner notes the multiplicity of existing railway pensioner organizations and says it would "not be appropriate" for the Commission to recommend that any particular one or more group be chosen as the basis for the railway pensioner organization which he envisages. He believes that the organization can be created on a voluntary (rather than statutory) basis with the support and co-operation of CRLA and the companies and suggests that the precise form of the organization could be worked out by CRLA and the existing groups, under the auspices of the Minister of Labour. He also recognizes that the new structure will result in some reduction in the autonomy of the CRLA but he is optimistic that CRLA would adopt a positive attitude which could serve as a model for unions in other industries.

CN completes second main in Winnipeg area

A 45-mile section of double tracking was completed in October by the Canadian National between Winnipeg and Portage la Prairie, Manitoba. This 45 miles of double tracking linked up previous double-track sections so that now all 55.7 miles of main between the two cities are double track except for a single-track bridge across the Assiniboine river.

Both tracks of the mainline are equipped with centralized traffic control providing for bidirectional running. Intermediate signals provide for following moves. A siding at Mile Post 33, with crossovers to both mains, permits faster trains to pass slower ones.

Final cut-in began Oct. 5, 1976 and for the next 10 days signalmen concentrated their efforts on connecting and testing the new signal system, disconnecting the old, and making changes to the control machine and panels at Winnipeg. Train operators and dispatchers worked extra shifts to man five temporary block offices during the signal cut-over period to keep traffic moving on written clearance orders until the new signals were fully operational.

Signalmen to meet in Toronto on March 12

The Brotherhood of Railroad Signalmen will hold a regional meeting on Saturday, March 12, 1977 at the Royal York Hotel in Toronto, Ont. A tentative program features the following topics to be discussed by experts in the respective fields: workmen's compensation, Hall government pension report, anti-inflation board activities, future railway union-company negotiations, and VIA (Canadian government's version of Amtrak). President C. J. Chamberlain and other officers of the Brotherhood will bring members up-to-date on union activities.

Hamilton, Ontario to be site of C&S meeting

The northern sectional meeting of the Communication & Signal Section, AAR, will be held Thursday, May 19 at the Royal Connaught hotel. J. R. Ragsdale, engineer communications & signals, Toronto, Hamilton & Buffalo, will be chairman of the meeting.

CP RAIL: **T A. Makinson** appointed assistant signal supervisor at Winnipeg, Man. **B. T. Popel** appointed assistant signal supervisor with headquarters at Winnipeg. **H. A. Kerns,** assistant superintendent signals at Winnipeg has retired.

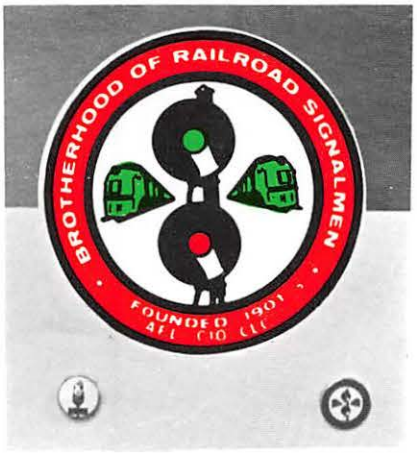
Cloth emblem is available with BofRS in white letters on red border, two locomotives and green over red searchlight signal.

Coasters (3" dia.) come in black and gold, or in white, red and green with BofRS emblem.

Playing Cards with the BofRS emblem are now available. These high-quality cards come in the conventional bridge decks, including jokers. Cards and emblem are in color.

Golf caps with the BofRS emblem in color are available in Medium or Extra Large with adjustable head band. These lightweight, net caps come in Red, Black or White.

The 8-volume signalman's training course covers the following subjects: 1—electricity, circuit symbols and nomenclature; 2—signal terms, relays, track circuits and meters; 3—automatic block signaling, time code control and electronics; 4—traffic control systems and power switch machines; 5—highway grade crossing warning systems and FRA RS&I tests; 6—remote control and automatic interlockings; 7—ctc machines and their operation; 8—maintenance of signal equipment.



Signalmen's decal (top) has adhesive backing so it can be applied to glass, leather, metal, etc. for BofRS identification on car windows, bumpers, luggage, hard hats, etc. The emblem is 4" or 3" in dia. It has a red border with white letters. The signal displays green over red. Below left is a metal **colorlight signal lapel pin** ½" in diameter with signal showing green over yellow over red on white enamel background. Signal and pin otulined in gold. Below right is ⅝" **BofRS lapel pin** identical to decal except letters and outline are in gold.

Use this handy order form:

A history of the Brotherhood of Railroad Signalmen has been written by the late A. E. Lyon, president emeritus, which covers the 75 years of the Brotherhood since its founding in 1901.

Master National Agreement Book has the basic provisions of national agreements negotiated with U.S. railroads and the BofRS. They are contained in a loose-leaf binder with 2-inch rings so there is room for additional material, such as local agreements. The 23 sections are: A—summary of wage changes; B—summary of other benefits; C—Washington job protection agreement of 1936; D—vacations; E—Union shop agreement; F—Holidays; G—Claim and grievance handling; H—Health and welfare; I—Force reductions; J—Employment security; K—Travel time and away-from-home expenses; L—Off-track vehicle accidents; M—Jury duty; Mc—Current agreement; N—Overtime; O—Camp cars; P—Apprentice programs; Q—Change of residence; R—Earnings deduction in discipline cases; S — Supplemental sickness benefits; T—Union dues checkoff; and U—Amtrak C-1, C-2; V—Seniority modification agreement.

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Obituaries

CORRECTION: R. J. Glasson is alive and well

Our sincere apologies to Brother R. J. Glasson, his family and friends. Unfortunately, we reported him as dead in our January/February 1977 issue on page 38. Happily, we can now report that the retired communication and signal inspector for the former Pennsylvania at Indianapolis, IN is very much alive and enjoying his well-earned retirement.

Albert D. Nelson, retired interlocking maintainer at Portland, OR, for the Union Pacific, died March 28, 1976. Brother Nelson retired in 1970 after completing 44 years service with the railroad. He was active in Portland Lodge No. 155 and had served as chief signalman.

Edgar E. Hartsough, retired signal maintainer for the Baltimore & Ohio at Athens, OH, died July 3, 1976. Brother Hartsough had completed 33 years service when he retired in 1974. He was a member of Winton Lodge No. 94.

Albert S. Kilmer, 84, retired signal maintainer for the Santa Fe at Fort Sumner, NM, died Jan. 7, 1977. Early in his railroad career, Brother Kilmer had been employed in the signal department of the Chicago & North Western at Potter, NE, and had been a member of Illinois Lodge 108. Upon transferring to the Santa Fe, Brother Kilmer became a member of Rocky Mountain Lodge 161. He was very active in the Masons having been raised in Mount Moriah Lodge No. 54 on Nov. 27, 1930; served as Master in 1935 and 1954; was District Deputy Grand Master for four years and District Deputy Lecturer for thirteen. Also, he was Grand Tyler in 1953. In 1961, Brother Kilmer was Grand Chauffer for Grand Master Ray J. Lofton. Services for Brother Kilmer were conducted in the Fort Sumner United Methodist Church by Reverend Brother Ira Turner. Masonic rites were delivered by Grand Secretary Ron Brinkman. Brother Kilmer is survived by his wife Mary, three sons and several grandchildren.

CORRECTION: M. J. Barber is alive and enjoying life

M. J. Barber, reported deceased in the January/February 1977 issue, page 37, is alive and enjoying the winter sun in DeFuniak Springs, FL. He writes that he also enjoys the summers in Sabina, OH. Our sincere apologies to Brother Barber, his family and his friends for this grievous error. Brother Barber retired from the Baltimore & Ohio in 1974. He was a signal maintainer at Washington Court House, OH. He had served as chief signalman and a trustee of Winton Lodge 94.

Robert A. Peterson, retired interlocking repairman at Tower A, Council Bluffs, IA for the Union Pacific, died August 9, 1976. Brother Peterson was a member of Rock Springs Lodge No. 8. He had completed 37 years service when he retired in 1973.

Stanley S. Schenavar, retired leading signalman for the Detroit & Toledo Shore Line at Monroe, MI, died April 17, 1976. Brother Schenavar had completed 45 years service when he retired in 1973. He was a member of Lodge No. 214.

Oscar B. Wright, retired signal maintainer of tests for the former Pennsylvania and later Penn Central at Trenton, NJ, died August 20, 1976. Brother Wright had completed 43 years service when he retired in 1972. He was a member of Trenton Lodge No. 102.

Norman W. Woolf, retired leading signal maintainer for the Baltimore & Ohio at North Vernon, IN, died April 7, 1976. Brother Woolf, a member of Winton Lodge No. 94, had completed 34 years service when he retired in 1970.

Gavin Stewart, retired signal maintainer for the former Northern Pacific at Deer Lodge, MT, died July 11, 1976. Brother Stewart had completed 44 years service when he retired in 1959. He was a member of St. Paul Lodge No. 87.

Dale Christenson, signal maintainer on the Burlington Northern at Watertown, SD, died Feb. 3, 1977. Brother Christenson, age 39, had been a signal maintainer at Carlton and Kerrick, MN. He was a member of Great Northern Lodge 154.

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Signalman's Worksheet

Coded track circuits

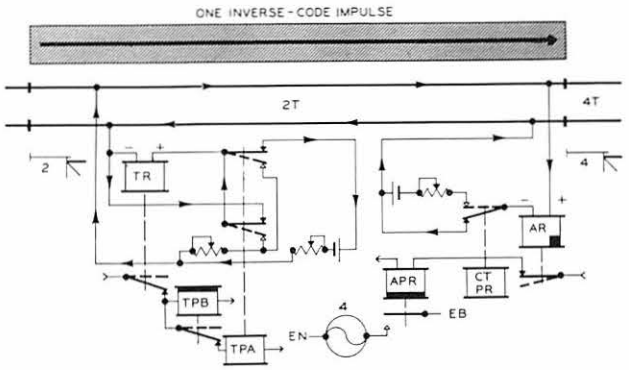

Fig. 413: Simplified typical inverse-code circuit. Circuit is shown with contacts positioned at the instant of an inverse-code impulse.

Thus far the path of a direct-code impulse has been described. The following deals with the path of an inverse-code impulse as shown in Figure 413. This is the same circuit as shown in Figure 412 except that the contacts are shown in the positions they assume during the transmission of an inverse-code current impulse.

To return to the leaving end, CTPR closes its back contacts, connecting the negative terminal of AR to the negative track lead. The positive terminal of AR is regularly connected to the positive track lead.

The current of the direct-code impulse ceases to flow through TR, and TR drops, applying local current through its back contacts to both TPB and impulse relay TPA. TPA picks up faster than TPB, which is slightly slow pickup, thus closing its contacts before TPB can pick up and break the circuit to it. During the interval that TPA is up, a short impulse of inverse-code current is applied to the rails. The duration of this inverse-code current impulse is governed by the time TPA remains in its energized position.

Passing through the rails to the leaving end, the inverse-code current flows through polar-stick relay AR at its positive terminal, and the relay assumes its normal position. Local current then passes through the front contacts of AR and picks up APR. APR is sufficiently slow in releasing so that the recurring current impulses received through front contacts of AR will hold it up.

A train entering track circuit 2T prevents TR from again picking up. With TR back contacts steadily closed, TPB remains up and TPA remains down, thus stopping transmission of the inverse-code current impulses. The direct-code current impulses now pass through the circuit completed by the train shunt, and AR is driven to its reversed or "dropped" position. Thus current is cut off entirely from APR, and it drops to close an approach-lighting circuit to signal 4. Note that this system gives full-block indication, as the inverse code ceases immediately upon entry of a train into track circuit 2T.

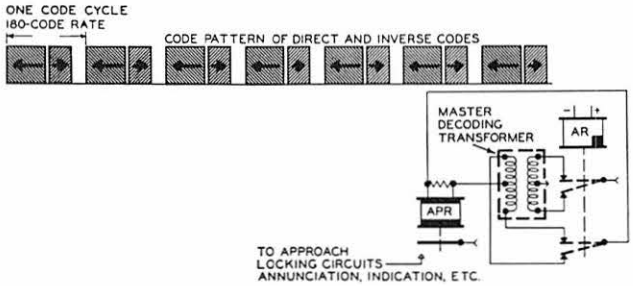

Fig. 414: Portion of simplified typical inverse-code circuit showing method of decoding inverse code. Circuit is shown with contact coding, track circuit unoccupied.

Decoding Inverse Code

When inverse code is used to control vital circuits such as approach locking, annunciation, indication, etc., it is generally considered preferable to decode the inverse code, using an arrangement such as is shown in Figure 414, where APR is controlled by current derived from a master decoding transformer. This system requires that AR be continuously pulsing in order to hold APR with its front contacts closed.

Figure 414 represents the circuit as coding, that is, responding to the recurring current impulses of direct and inverse code. The approximate relative spacing and durations of the inverse code current impulses and 180-rate direct-code current impulses are illustrated in the code pattern diagram above the circuit.

CUT SECTIONS

In installations where signals are spaced so far apart that the distances between signals are greater than the practical operating length of a coded track circuit, it obviously becomes necessary to introduce a code-repeating cut section. It should be noted here that where one cut section would be required for a coded installation, two or even more cut sections would probably be required for steady-energy track circuiting of the same installation.

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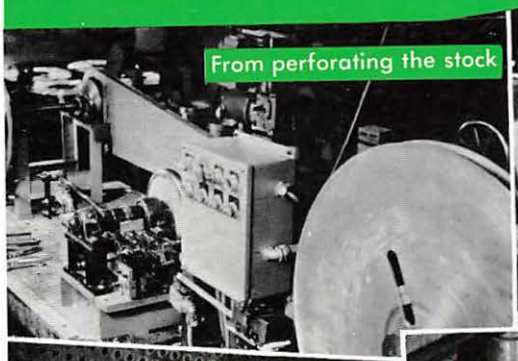

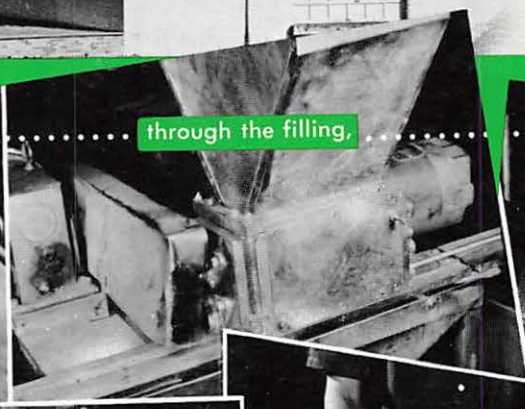

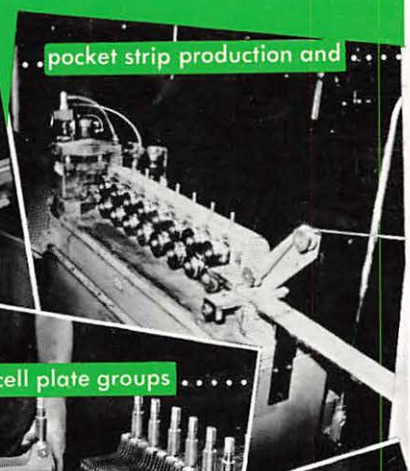

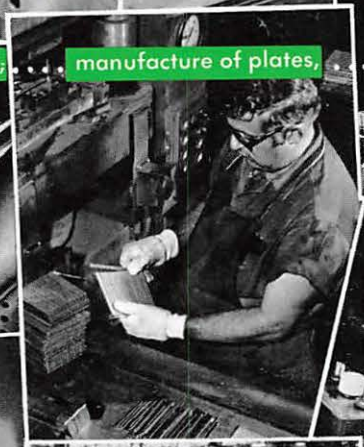

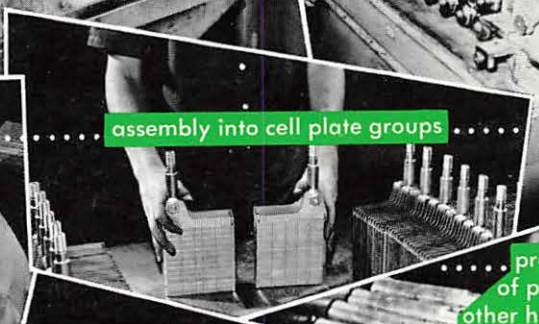

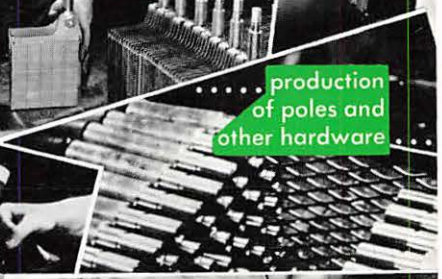

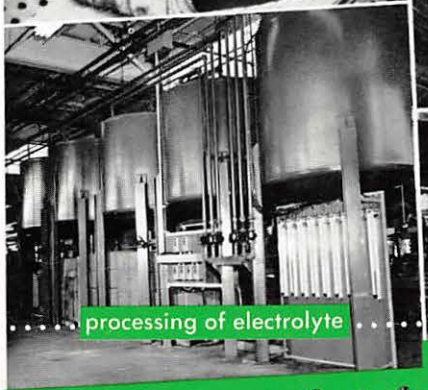

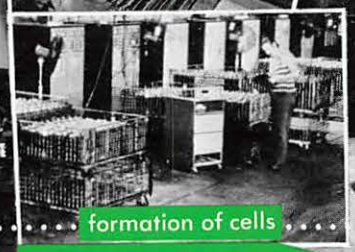

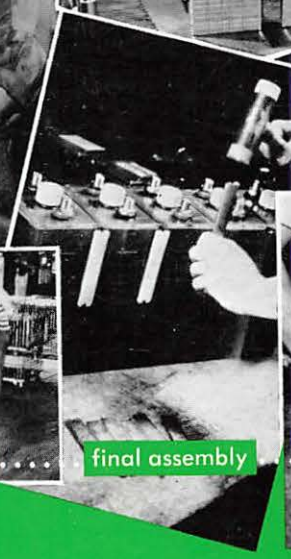

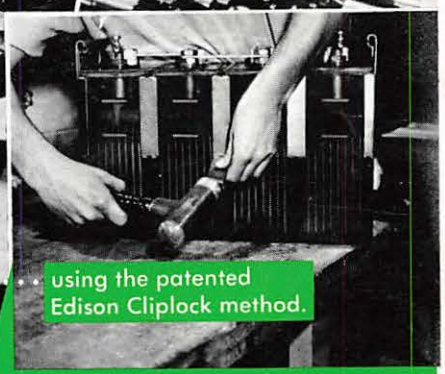

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